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Monthly Cyclopedia and Medical Bulletin

(CONSOLIDATED)

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NEWS AND THERAPEUTIC HINTS.

Constipation.

A.

℞ Aloes, gr. xij.
Extracti belladonnæ,
Extracti nucis vomicæ, āā gr. iij.
Extracti physostigmatis, gr. ij.

M. et ft. pil. no. xij.

B.

℞ Resinæ podophylli,
Extracti belladonnæ foliorum,
Extracti nucis vomicæ, āā gr. iij.
Extracti physostigmatis, gr. ij.

M. et ft. pil. no. xij. (Can. Lancet.)

Tuberculous Ulcers of the Sigmoid, Rectum, and Perianal Regions.

Tuberculous ulcers of the sigmoid, rectum, and perianal regions can be more satisfactorily treated than those higher up because topical applications can be employed. When the ulcers are in the bowel the treatments are made through the proctoscope by means of a cotton-covered applicator dipped in a 20 per cent. solution of ichthyol and glycerin, balsam of Peru, argyrol, protargol, or a weaker solution of silver nitrate, but when sluggish or covered with flabby granulations these remedies may be used much stronger. Chemical caustics like nitric and glacial acetic acids should not be employed because they frequently extend to and destroy healthy tissue and when more radical treatment is indicated the electric or Paquelin cautery should be substituted for them. Perianal tubercular ulcers require frequent cleansing and about the same topical applications as rectal, but when stimulation and cauterization aggravate them the lesions should be treated twice daily with a 10 per cent. solution of methylene blue or be covered with cotton, soaked in an emulsion composed of olive oil, Oj; bismuth, ℥ij, and orthoform, 3j, to allay pain and encourage healing.

Irrigation per rectum and topical applications frequently fail because the fluid cannot be made to reach all of the affected gut, in which case one must resort to surgical procedure. (S. G. Gant, in Post-Graduate.)

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NEWS AND THERAPEUTIC HINTS.

Prevention of Alopecia.

Freshwater, in the Practitioner, for October, 1913, discussing the hygiene of the hair, states that the liquid soap introduced by Hebra, to which thymol may with advantage be added as an antiseptic, is an excellent preparation for use in shampooing:—

℞ Thymolis, gr. xv (1 Gm.).
Saponis viridis,
Alcoholis, āā partes æquales ad Oj (500 Gm.).
Misce.

In using this, a tablespoonful should be poured into the hollow of the hand, thoroughly rubbed on the scalp, and allowed to remain for a few minutes. The process being then repeated with a tablespoonful of tepid water, a lather is produced. The longer it is permitted to remain, the more the emulsifying properties of the soap are exerted. The head should then be rinsed with plenty of warm water. Being alkaline, Hebra's preparation tends to dry the hair. For very dry hair, the author recommends substitution of the following:

℞ Pulveris saponis castiliensis, 3iij (12 Gm.).
Sodii bicarbonatis, 3j (4 Gm.).
Olei rosæ, q. s.
Aquæ rosæ, f℥iv (120 c.c.).
Misce.

A tablespoonful of this preparation should be placed in a basin of water, and will give an abundant lather.

After the head has been shampooed, the hair should be dried quickly and thoroughly, and a little almond or olive oil, perfumed if desired, rubbed on the scalp to take the place of the fat removed by the washing. Upon then brushing the hair carefully, a fine film of the oil will be carried along to each hair. Too frequent washing, the author insists, causes the hair to become dry, brittle, and lusterless, and to break off short. He thinks there is reason to believe that premature baldness in men has become more prevalent since it has become usual to wash the head frequently and since the custom of greasing the hair has gone out of fashion. Shampooing should take place weekly in children, but only once every two or three weeks in adults. (N. Y. Med. Jour.)

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NEWS AND THERAPEUTIC HINTS.

A Tree as Universal Provider.

An even more marvelous tree than the date palm is the Carnahuba palm, which grows in Brazil. Its roots produce the same medicinal effect as sarsaparilla. From parts of the tree wine and vinegar are made. Its fruit is used for feeding cattle.

Of the straw, hats, baskets, brooms and mats are made. It is also used for thatching houses. The pulp has an agreeable taste and the nut is sometimes used as a substitute for coffee. Its stems afford strong, light fibers, and serve also for joists, rafters, and other building materials. It yields a saccharine substance, as well as a starch resembling sago.

Of the wood of the stem, musical instruments, water tubes, and pumps are made. From the stem a white liquid similar to the milk of the cocoanut may be extracted. Moreover, salt is extracted from the tree, and likewise an alkali used in the manufacture of common soap. (Health.)

Remedies for Insect Bites.

The following mixtures make good remedies to give those patients who are very susceptible to insect bites, and who wish something to keep about the house ready for such emergencies. Frequently such a sting or bite is very painful to a young child:—

℞ Phenol, gr. xv.
Glycerin, f℥ij.
Rose water, f℥iv.

Or:—

℞ Salicylic acid, gr. xv.
Collodion, f℥iiss.
Spirit of ammonia, f℥vss.

Or:—

℞ Fluidextract of rhus toxicodendron, f℥j.
Water, f℥viij.

Or:—

℞ Powdered ipecac, ℥j.
Alcohol,
Ether, of each, f℥j.

Or:—

℞ Betanaphthol,
Camphor, of each, ℥ss.
Lanolin, ℥j.

Or, cover the bite with cigar ashes and moisten. The recent burning insures asepsis, and the contained potassium carbonate neutralizes the minute quantities of formic acid deposited with the sting or bite of the insect. (Med. World.)

Glyco-Thymoline is of benefit for teething babies; a little rubbed on the gums, rapidly reduces the inflammation and conserves the little one's comfort.

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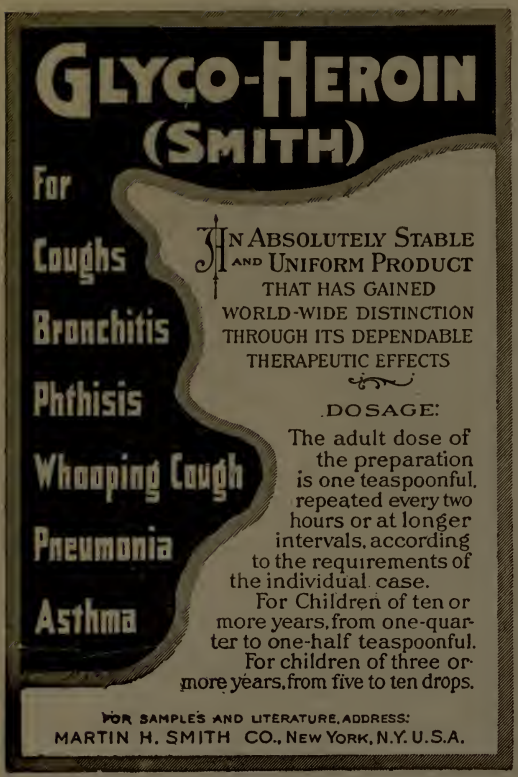
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NEWS AND THERAPEUTIC HINTS.

Gastric Hyperacidity.

Wegele, in the recently issued translation by Gross and Held of his work on "Therapeutics of the Gastrointestinal Tract," points out that when two or three alkaline drugs are given in combination smaller doses will suffice to bring about a given degree of effect than if a single drug is used. Among suitable combinations he mentions the following:—

I.

℞ Magnesii oxidi,
Sodii bicarbonatis,
Calcii carbonatis, āā 3v (20 Gm.).
Extracti bellad. fol., gr. v (0.3 Gm.).
M. bene et ft. pulvis.
Sig.: One teaspoonful two hours after meals.

II.

℞ Magnesii oxidi,
Rhei pulveris, āā gr. lxxv (5 Gm.).
Sodii bicarbonatis,
Sacchari lactis, āā 3v (20 Gm.).
M. et ft pulvis.
Sig.: One teaspoonful after meals.

The following preparations have been recommended by Boas:—

III.

℞ Magnesii oxidi,
Sodii citratis, āā ℥ss (15 Gm.).
Extracti belladonnæ foliorum, gr. iss-iij (0.1-0.2 Gm.).
M. bene et ft. pulvis.
Sig.: One teaspoonful one to two hours after meals.

IV.

℞ Magnesii oxidi, ℥ss (15 Gm.).
Bismuthi subnitratis,
Sodii carbonatis, āā gr. lxxv (5 Gm.).
Extracti belladonnæ foliorum,
Extracti nucis vomicæ, āā gr. iss-iij (0.1-0.2 Gm.).
M. bene et ft. pulvis.
Sig.: One teaspoonful half an hour after meals.

Rosenheim prescribes as follows:—

V.

℞ Magnesii oxidi,
Sodii bicarbonatis, āā gr. lxxv (5 Gm.).
Potassii carbonatis, gr. xlv (3 Gm.).
Extracti belladonnæ foliorum, gr. v (0.35 Gm.).
M. bene et ft. pulvis.
Sig.: One-half teaspoonful half an hour after meals. (N. Y. Med. Jour.)

Hysterical Aphonia.

Citelli, in Revue hebdomadaire de laryngologie, etc., for December 20, 1913, is credited with the following simple expedient for the relief of this condition: Push the thyroid cartilage to one side with sufficient vigor to cause pain, taking the patient unaware. Almost invariably this will lead to an immediate verbal protest on the part of the patient. (N. Y. Med. Jour.)

Seborrhea of the Face.

Seborrhea of the face (pityriasis simplex) occurs in individuals whose scalp is similarly affected. It consists of fine, fatty scales on a red base, and has a predilection for the upper part of the forehead and sides of the nose. It may be quickly cured by the following ointment, which should be rubbed on each night and washed off with soap and water in the morning:—

℞ Sulphuris præcipitati, gr. xv.
Resorcinolis, gr. x.
Olei cadini, ♏x.
Paraffini mollis,
Adipis lanæ hydrosi, āā ℥ss.

Any coexistent seborrhea of the scalp must be treated on the usual lines. (D. J. Guthrie, in Prescriber.)

Concerning Medicinal Malt Preparations

The manufacture of malt preparations for medicinal use is a highly specialized professional work, and is successfully accomplished only under the direction of competent chemists. While in some respect similar to the brewing of beer, there are vital differences both in the materials which enter into these products and the processes of manufacture.

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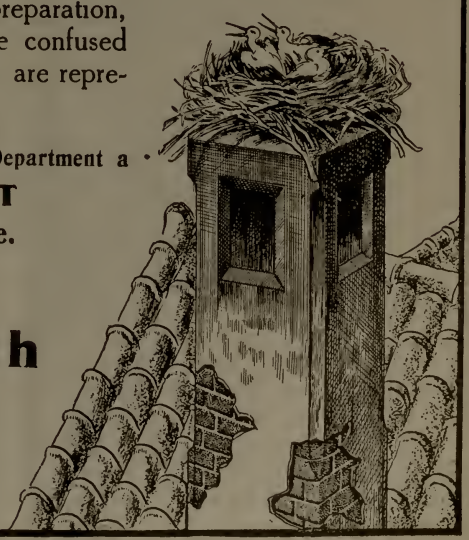

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F. A. DAVIS COMPANY, Medical Publishers, 1914-16 Cherry St., Philadelphia, Pa.

NEWS AND THERAPEUTIC HINTS.

Pain and Inflammation.

M. Tucker finds a saturated solution of magnesium sulphate a valuable means of allaying pain and inflammation in certain cases. The solution is applied to the skin in the form of a compress.

(Bull. gén. de thérap.)

Impetigo.

Gougerot, in Progrès médical, recalls the fact that what has been termed dry impetigo, or pityriasis faciei, consisting of small, rounded, scaly areas sometimes observed on children's faces, was shown by the researches of Sabouraud to be due, like true impetigo, to streptococcic infection, and not to represent, as previously thought, a form of eczema. Treatment of this condition should at first consist merely in washings with boiled water in which borax or sodium bicarbonate has been dissolved. The face should be washed with a soap containing borax and tar, after which cold cream or starch glycerite should be applied. Where these measures do not suffice, applications of the following solution with cotton should be made:—

℞ Acidi salicylici, gr. xv (1 Gm.).
Alcoholis, f℥iij (10 c.c.).
Aquæ sterilisatæ, f℥iij (90 c.c.).

M. et ft. lotio.

After applying this lotion a weak calomel ointment should be used:—

℞ Hydrargyri chloridi mitis,
Acidi tannici, āā gr. v (0.3 Gm.).
Petrolati, ℥j (30 Gm.).

M. et ft. unguentum.

The quantity of excipient in this formula should be gradually reduced to 5 or 2.5 drams (20 and 10 Gm.), in order to obtain a more active ointment. In rebellious cases ointments containing sulphur, tar, or oil of cade may be prescribed. The following preparation is useful both in the disorder under consideration and in seborrheic eczema:—

℞ Hydrargyri oxidi flavi, gr. xv (1 Gm.).
Picis liquidæ, ℥iss (6 Gm.).
Petrolati, ℥ivss (18 Gm.).

M. et ft. unguentum.

(N. Y. Med. Jour.)

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$12.80 freight paid—see note—for this handsome bookcase in Solid Oak, Golden, Fumed or Weathered finish.

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Drawers on Roller Bearings and fitted with auto-locking follow blocks.

Files are almost wear proof

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Compact—Convenient

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There are 28 kinds of sections to meet almost all requirements. All handsomely designed, durably constructed and beautifully finished. Solid Quartered Oak. You add sections only as more filing space is needed.

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NEWS AND THERAPEUTIC HINTS.

Irritable Cough.

A. P. Luff has found the following a useful mixture for the relief of irritable cough, and especially of postinfluenzal cough:—

℞ Morphine hydrochloride,
Heroin hydrochloride, of each, gr. 1/24.
Apomorphine hydrochloride, gr. 1/48.
Dilute hydrochloric acid, ♏v.
Syrup of wild cherry, f℥ss.
Chloroform water, enough to make f℥ss.

This dose should be taken every four hours. The medicine is very palatable and the presence of the hydrochloric acid effectually prevents the precipitation of any of the alkaloids. (Lancet.)

Chronic Bronchitis.

℞ Thymolis, gr. iij.
Acidi benzoici, gr. xlv.
Olei menthæ pip., ♏x.
Tinct. eucalypti, f℥ivss.
Alcoholis, f℥iij.

M. Sig.: Put a sufficient amount in the glass of water to render the water milky and use as a mouth wash; or:—

℞ Acidi tannici, ℥iij.
Mentholis, ℥ij.
Thymolis, gr. xv.
Tinct. benzoini, f℥iss.
Alcoholis, f℥iij.

M. Sig.: Ten drops in half a glass of tepid water. (Med. Sentinel.)

Asphyxiation.

McCombs summarizes the treatment of poisoning by illuminating gas as follows:—

I. First stage, preceding loss of consciousness: (1) Fresh air. (2) Aromatic spirit of ammonia. (3) Effervescent sodium phosphate, to produce eructations and relieve nausea. (4) Oxygen inhalation. (5) Analgesics for headache. (6) Avoidance of violent exertion.

II. Second stage, patient unconscious, but breathing: (1) Artificial respiration, rhythmic compression of lower thorax to assist breathing. (2) Oxygen, preferably under pressure. (3) Camphor, caffeine, digitalis, and strychnine hypodermically. (4) External heat, if indicated. (5) Massage of muscles after aerating lungs. (6) Treatment to be conducted in warm room. (7) If not prompt recovery, venesection and normal saline infusion, or use of "pulmotor."

III. Third stage, patient unconscious and not breathing: (1) Same measures as in preceding stage. (2) Blood transfusion. (3) Artificial respiration by Schafer method, patient prone. (Jour. Med. Soc. of N. J.)

SANMETTO FOR GENITO-URINARY DISEASES.

A Vitalizing Tonic to the Reproductive System.

Specially Valuable in Prostatic Troubles of Old Men—Irritable Bladder—Cystitis—Urethritis—Pre-Senility.

SOOTHING — RELIEVING — RESTORING.

DOSE:—One Teaspoonful Four Times a Day. OD CHEM. CO., NEW YORK.

Beware of the so-called Elixir Compounds claiming to be "the same thing" or "just as good" if you do not wish to be disappointed.

NEWS AND THERAPEUTIC HINTS.

Drugs Simulating Sugar in Urine.

Dr. Coleman states that the following drugs, when ingested, may cause the urine to reduce Fehling's solution and respond to some other tests for sugar: acetanilide, arsenous, salicylic and dilute hydrocyanic and sulphuric acids, alcohol, amyl nitrite, chloral, chloroform, copaiba, glycerin, mercury, morphine, strychnine, and turpentine. (Med. Summary.)

Hiccough.

F. H. Mead, in the Medical Record, reports a case of persistent hiccough in a febrile patient with dilated stomach, enlarged prostate, and interstitial nephritis in whom, after peppermint water, morphine and atropine, chloretone, and mustard had failed or brought only temporary relief, administration of a saturated solution of menthol in alcohol, in a little hot water, was promptly followed by cessation of the hiccough. Upon administration of three additional doses in the next twenty-four hours, no recurrence took place. (N. Y. Med. Jour.)

Heartburn in Pregnancy.

Dr. Hart ("Guide to Midwifery") states that, while heartburn is a very common symptom in pregnancy, it demands attention, since there are always suspicions that it may prove a persistent condition. It may also indicate that in the later stages of pregnancy albumin will appear in the urine.

The patient should be given 10 drops of the B. P. saccharated lime solution in each glass of milk she takes. The lime solution in question is made by shaking calcium hydroxide with a solution of refined sugar and allowing the excess to settle, and contains the equivalent of about 8 grains of lime in each fluidounce.

The following preparation should also be administered:—

℞ Bismuthi subnitratis, gr. x.
Sodii bicarbonatis, gr. vj.
Pulveris rhei, gr. ij.

Fiat pulvis. Mitte tales no. xxiv.

Sig.: One powder twice daily after food in a wafer moistened with water. (Med. Summary.)

Sterilization of Scalpels.

While it is generally recognized that the sterilization of metal instruments can be more reliably effected by boiling them than by the use of antiseptics, and accordingly most instruments are submitted to this process, a notable exception is made of cutting instruments, such as scalpels, which of all instruments ought to be perfectly sterile. The objection to boiling these arises from the fear of impairing the keenness of the blades, and consequently many surgeons content themselves with the method of sterilization by antiseptics. It is quite true that knives can be damaged in the course of boiling, both mechanically and through the softening of the steel, but it does not necessarily follow that they need be, if proper precautions be taken. Mechanical damage resulting from the contact of the knives with each other in the course of boiling can easily be avoided by placing them in a special rack in the sterilizer. The more serious impairment of softening, caused by the subjection of the knives to the temperature of boiling water for prolonged periods, can be prevented by chilling them immediately upon their removal from the sterilizer, by plunging them into cold alcohol, for it is the gradual cooling which destroys the temper of the steel. (Dietetic and Hyg. Gaz.)

Restore Normal Circulation

in an inflamed part, and the rest is easy—the "funeral-trains" of dead cells and bacteria pass **out**; the "food trains" with nourishment for the living cells, pass **in**.

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promotes normal circulation, by its continuous moist heat, its hygroscopic, osmotic power, and its stimulating action upon the cutaneous reflexes.

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**ANEMIA of All Varieties:
CHLOROSIS: AMENORRHEA:
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TUBERCULOSIS: RICKETS:
RHEUMATISM: MALARIA:
MALNUTRITION: CONVALESCENCE:
As a GENERAL SYSTEMIC TONIC
After LA GRIPPE, TYPHOID, Etc.**

DOSE: One tablespoonful after each meal.
Children in proportion.

M. J. BREITENBACH COMPANY
New York, U. S. A.

Our Bacteriological Wall Chart or our Differential Diagnosis Chart will be sent to any Physician upon request.

NEWS AND THERAPEUTIC HINTS.

Pityriasis Alba.

An eruption, very common among children and sometimes called *pityriasis alba*, consists of pink, roughened patches in the neighborhood of the mouth and nose. They are of streptococcal origin and may be regarded as a mild form of impetigo. French writers name the condition *impétigo furfureuse*. Not infrequently one finds typical impetigo lesions behind the ears of these patients. Although relapse is common, the affection is readily amenable to treatment by a 10 per cent. tannin and calomel ointment:—

℞ Hydrargyri chloridi mitis,
Pulveris acidi tannici, āā gr. iv.
Paraffini mollis, ʒj.

(Dr. Guthrie, in Prescriber.)

New Study of Anabiosis.

The state in which all vital functions of an organism are suspended without actual death, known as anabiosis, has been recognized for two centuries past, at least as concerns the lower orders of life, and such specimens can be dried and then recalled to life even after a considerable time by the sole action of moisture. A Russian scientist, Bachmetief, takes up the question as regards higher animals. He observes the organism of insects at decreasing temperatures down to —10° C., at which point death ensues. He thought at first that death was due to congelation of the liquids of the animal, but afterward saw that these congealed at 5° and all the vital functions then became impossible. At temperatures intermediate between this and the death-producing point there occurs a strange state of anabiosis where the organism appears between life and death. In many cases he could bring the specimens back to life, even after a long time, by gradually raising the temperature. He compares this state of latent life to a clock whose pendulum is stopped, but whose mechanism can be put into movement by a slight impulse given to the pendulum. M. Bachmetief extended his researches to small mammifers, such as white mice and bats, and, using artificial respiration, these animals can be brought to a state of lethargy at low temperatures, such as 0° C. or below. He now intends to experiment upon rabbits, monkeys, and even human beings. (Scientific American.)

NEWS AND THERAPEUTIC HINTS.

To Disguise Phenol.

It is generally supposed that the odor of phenol cannot be disguised, whereas much may be done to conceal its odor. This is often desirable in the practice of medicine. Either camphor or any of the following oils will make a profound impression on this persistent odor: peppermint, cajaput, caraway, clove, or wintergreen. The following process yields the "perfumed" phenol:—

℞ Phenol crystals, ʒj.
Alcohol, fʒj.
Oil of bergamot,
Oil of eucalyptus, of each, ♏x.
Oil of citronella, ♏iij.
Tincture of cudbear, ♏x.
Water, enough to make fʒx.

Mix, allow to stand for several days, and then filter through fullers' earth.

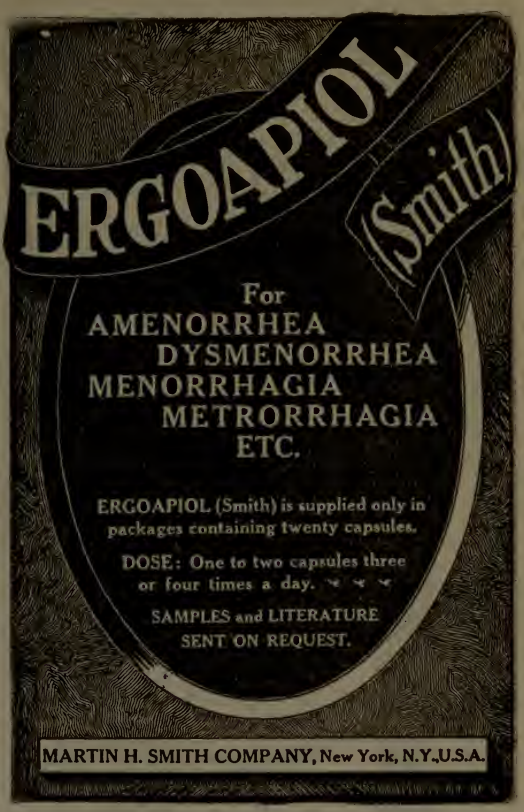
Or, the following formula may be employed:—

℞ Phenol crystals, ʒiv.
Cologne water, fʒiv.
Dilute acetic acid, fʒix.

Keep in a cool place for a few days, and then filter. (Medical World.)

Aluminum Cooking Utensils.

Utensils of aluminum are now so largely used for culinary purposes in institutions that the question as to what effect the various articles of food and cooking materials have upon the metal is one of considerable importance. In this connection some interesting experiments have recently been conducted at the Lancet Laboratories, which, on the whole, tend to show that with ordinary care there is little danger of contaminating food by the use of *pure* aluminum vessels. According to the report, the observations made, under conditions similar to those prevailing in the kitchen, were the effect of cold and hot water on aluminum, of a 1 per cent. solution of common salt, of water and acetic acid, of the same solution with the addition of salt, of tartaric acid, carbonate of soda, of bacon and tomatoes, with butter, salt and pepper, fried in an aluminum pan, of preparing soup, and of boiling vegetables in an aluminum saucepan. The only instance in which any reaction worth consideration was shown was in the use of carbonate of soda, when the metal became discolored, and a test of the solution strongly indicated the presence of aluminum. Traces of aluminum were also found in the experiments with salt, tomatoes, beefsteak, preparations of soup, apples, and Brussels sprouts, but they were so slight as to be entirely negligible. As regards the tests with water no sign was found of the presence of suspended particles of the oxide of aluminum, or of a soluble salt in water boiled in an aluminum saucepan. Wet aluminum does, however, oxidize when left long in contact with the air, and it has been found that if cold water be left in an ordinary aluminum vessel for twenty-four hours a gelatinous substance sweats out containing aluminum and silica. As a protection against the combined action of moisture and air it is recommended that the surface be covered with a film of hydrocarbon oil. (The Hospital.)



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Physiologically standardized Ergot, Digitalis etc., in sealed glass ampoules *from which the air has been exhausted.* Activity retained permanently. 16-32 minims and 1 fl. oz. sizes.

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THE NORWICH PHARMACAL CO.
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DELIRIUM TREMENS— —ITS MANAGEMENT.

An essential in the treatment of Delirium Tremens is to bring about sleep, and this is promptly and safely done with

PASADYNE

(DANIEL'S CONCENTRATED TINCTURE OF PASSIFLORA INCARNATA.)

A few doses of PASADYNE (Daniel) quickly change the high state of excitation into one of calm quiet and finally sleep.

In all highly excited states of whatsoever cause PASADYNE (Daniel) will be found of the utmost service as a prompt calming agent.

RELIABLE— WITHOUT HABIT— SAFE.—

PASADYNE is the new name for Passiflora Incarnata (Daniel's Concentrated Tincture) adopted for convenience and to prevent substitution.

SAMPLES AND LITERATURE SUPPLIED TO PHYSICIANS PAYING EXPRESS CHARGES.

Laboratory of JOHN B. DANIEL, Atlanta, Ga.

NEWS AND THERAPEUTIC HINTS.

To Preserve Urine.

About 6 or 8 drops of chloroform are added to each fluidounce and the mixture well shaken. The excess of chloroform soon collects at the bottom of the bottle. Samples so treated will keep for months, even in the hottest weather. Chloroform promptly reduces Fehling's solution. If, therefore, it is desired to test for sugar, the chloroform must be removed by boiling the liquid, or, better still, the bismuth or phenylhydrazin test should be used. Chloroform does not interfere with these nor simulate sugar. (Med. Summary.)

Nutrient Enema.

The following makes a very good nutrient enema: Peptonized milk, f℥iij; decoction of starch, ℥ij; whites of 2 eggs, and a pinch of salt. This should be given every six hours. One teaspoonful of starch boiled with 2 ounces of water makes the right quantity for the decoction. (Hospital.)

In Managing the Various Neuroses

PEACOCK'S BROMIDES

are usually preferable to any other sedative, for owing to their quality and purity they can be given in sufficient dosage and for sufficient periods to insure the effects desired.

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has repeatedly proven its efficiency, and when cholagogue action or hepatic stimulation is desired without catharsis or systemic depression, it is the one remedy to rely upon.

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An ideal laxative that offers far-reaching possibilities in the scientific treatment of constipation.

Acting solely through its influence on physiologic processes, this effective remedy is not only free from drastic or unpleasant action, but its benefits are remarkably lasting.

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An efficient remedy in all affections in which the gastro-intestinal glands need stimulating.

Exceptionally useful in atonic indigestion, malnutrition, convalescence from the acute diseases, and all digestive disorders characterized by deranged or depressed functions.

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Here's A Plain Question, Doctor—

We want to ask you a plain question—first for our own information—second to make you ask yourself the question.

Here are the premises:—Some of the most learned men of your profession and in pharmacology say of Caffein as follows:

"Caffein Is Nature's True Stimulant"

"A substance which produces energy by its own hydrolysis, and thereby stimulates without corresponding depression. But after the mild stimulation, it leaves the system in its normal condition; and, being a substance of this kind and character, it cannot be habit-forming, for without a corresponding depression, there is no demand for a repetition or an increasing amount."

Don't you agree? Such being the case, can Coca-Cola be justly criticised for its Caffein content?

If you disagree, why?

Your reply will be considered confidential. Will say though that should we at any time wish to use it in the compilation of data we will so advise you and treat the matter as a professional consultation.

We Shall Appreciate A Reply

The Coca-Cola Co.

Atlanta, Ga.

Age 7 weeks. Weight 2 lbs. 13 ozs.
Before VIROL

INFANTILE DIARRHOEA

FROM THE MEDICAL REPORT:
Every food having failed and milk itself not being able to be digested, the child was fed on Virol and afterwards on milk (1 part), lime water (2 parts) and Virol. Virol was also given on the dummy the whole time as the child would not be quiet without it. The child consuming as much as 2 ½ ounces of Virol a day. This treatment was maintained until at 49 weeks he weighs 17 lbs.; has cut all of his front teeth, and is in perfect health.

VIROL

A Preparation of Bone Marrow, Red Bone Marrow, Malt Extract, Lemon Syrup, Etc.
A FOOD INVALUABLE IN INFANTILE DIARRHOEA

In daily use in more than 1000 Hospitals and Sanatoria
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Sole Agents: THE ETNA CHEMICAL COMPANY, 59 Bank St., New York
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Medical Publishers **PHILADELPHIA**

NEWS AND THERAPEUTIC HINTS.

Liquid Court-plaster.

A good liquid preparation for cuts and bruises that forms a covering like liquid court-plaster is made by mixing ¾ ounce of flexible collodion with ¼ ounce of ether. When this solution is applied to cuts it will not wash off. As the ether evaporates, more of it is added to keep the mixture liquid. (Dental Cosmos.)

Flatulence in Neurasthenia.

In an article on gastric flatulence S. Stern and L. B. Sachs refer to the flatulence which is part of a vicious circle in neurasthenia. In such cases nerve sedatives are indicated, as in the following prescription:—

℞ Sodii bromidi,
Strontii bromidi, āā ʒiss (5 Gm.),
Carbonis ligni, ʒj (3 Gm.).
Tinct. zingiberis, fʒv (15 c.c.).
Aq. cinnamomi, q. s. ad fʒvj (150 c.c.).

M. et ft. mist.

Sig.: A tablespoonful immediately after meals.
(New York Med. Jour.)

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NEWS AND THERAPEUTIC HINTS.

Mineral Treatment of Tuberculosis.

Robin ("Traitement de la Tuberculose") holds that an adequate supply of mineral substances is an indispensable factor in the successful treatment of tuberculosis, and suggests the following formula:—

Bone, freshly powdered, 1 Gm.
Precipitated chalk, 0.4 Gm.
Magnesium carbonate, 0.1 Gm.
Milk-sugar, 1 Gm.
Sodium bicarbonate, 0.5 Gm.

This quantity may be given twice daily after meals. (Buffalo Med. Jour.)

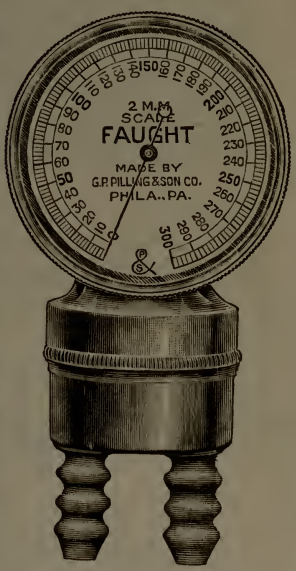
Therapeutic Lore of Spittle.

Dr. Felix Brémond (quoted in the Journal de médecine et de chirurgie pratique) refers to the therapeutic use of human saliva at different times. It was used externally especially as a remedy for skin diseases, notably ezcema, impetigo, and herpes, for simple wounds and superficial ulcers, for small-pox pustules, and even some mild manifestations of leprosy. But it is chiefly as a remedy for the bites of venomous reptiles that human spittle was thought to be valuable. Oribasius, Pliny, Varro, Nicander, Galen, Dioscorides, and many others among the ancients believed that saliva, especially that taken from a fasting man, was a specific against such poisons. Rabelias refers to the subject in the fourth book of Pantagruel. The celebrated natural philosopher, Francesco Redi, made experiments to test the general belief that the mere contact of the saliva killed reptiles, a belief expressed by Lucretius when he said that if one spat on a serpent it became weak, devoured itself, and died. Redi placed six vipers in a basket and during a fortnight poured into their throats the saliva of several men. The animals were none the worse; indeed, it seemed that this new food gave them greater strength and liveliness. The saliva was also believed to be fatal to scorpions. Avicenna taught that the saliva of a fasting man made worms come out of the ears. Pliny states that inflammation of the eyelids was cured by the application of saliva. Tacitus affirms that blindness can be cured by wetting the eyes and cheeks of the blind man with saliva. It is somewhat strange that Dr. Brémond makes no reference to the use made of spittle in the cure of the blind man in the Gospel (St. Mark viii, 22-25).

(Critic and Guide.)

PILLING-FAUGHT POCKET BLOOD PRESSURE APPARATUS

NOT A SPRING INSTRUMENT



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INFANTILE PARALYSIS

in the United States, we have published the only book in the English language on the Treatment of this condition.

Henry W. Frauenthal, A.C., M.D., the author of this work, has personally seen over 6000 cases in the past seven years, at the Hospital for Deformities and Joint Diseases, New York City, where one can see over 100 cases treated daily at its clinic.

The application of braces is not treatment but only an aid in locomotion and the prevention of deformities.

The correct methods of treatment of all the conditions incident to, and arising from, attacks of Infantile Paralysis as well as the diagnosis and differential diagnosis are given in correct detail, so that the average practitioner everywhere will find the work a complete, dependable guide in all the varied manifestations of this distressing condition.

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F. A. DAVIS COMPANY, Publishers

1914-1916 CHERRY STREET PHILADELPHIA, PA.

NEWS AND THERAPEUTIC HINTS.

Odor of Iodoform.

The odor of iodoform may be removed from the hands by the application of mustard. Moisten the hands with cold water, place a small quantity of dry mustard in the palm, rub it well over the hands, and wash off with soap and water. The odor can be removed from utensils in the same way, with the exception that the mustard paste should be allowed to remain on for several hours. (The Hospital.)

Simple Treatment for Anal Fissure.

M. Katzenstein, of Berlin, confidently recommends (Ther. d. Gegenw., Dec., 1913) his rapid non-operative treatment of anal fissure, as employed by him for some time. He employs a mixture of extract of belladonna, 10 parts; cocaine hydrochloride, 10 parts; ichthyol, 80 parts. The underlying idea is this: the atropine overcomes the irritability of the exposed nerve-endings; the cocaine allays the pain, so that the spastic conditions are relieved; and then, the ichthyol favors the healing process.

A pledget of cotton is rolled into a cord of the diameter of a thick knitting needle; then, having gently warmed and shaken up the medicament, this cord is saturated with it and then introduced into the anus, placing it at the opposite side of the commissure from where the lesion is located. The medicament gradually will spread to the sore, while direct application would be too painful. This is renewed daily until a cure is effected; but sometimes even the first application insures marked relief. To obviate occurrence of fresh fissures, it is advised to pass into the sphincter, every day for a while, a good-sized greased bougie (or, probably better, a small rectal dilator). (Clinical Medicine.)

Cocoanut Oil for Bedbugs.

Jackson recommends cocoanut oil for the destruction of bedbugs. He states that all that is necessary is to smear a little of the oil over the place where these insects are found, or where there are cracks and crevices the melted oil may be dropped into them. By the use of this medium any barrack, or hospital ward, or article of furniture, or bedding can, in a short time, be freed of the bugs and with a minimum amount of disturbance or upheaval. Cocoanut oil will destroy the ova as well as the adult insect. (Indian Med. Gaz.)

NO AGENT IS MORE POTENT
IN QUIETING A HIGHLY WROUGHT UP NERVOUS STATE RESULTING FROM LONG CONTINUED MENTAL TENSION
THAN
BROMIDIA
(BATTLE)
FOR IT SECURES PROMPT REST FOR THE PATIENT.
AMONG ITS ADVANTAGES ARE MINIMUM OF DOSAGE REQUIRED, AND FREEDOM FROM BAD AFTER-EFFECTS.
PAPINE when an anodyne is indicated.
ECTHOL has much worth as a vaginal application.
IODIA should be thought of whenever an alterative is needed.
BATTLE & CO., Chemists' Corporation, St. Louis, Mo.

NEWS AND THERAPEUTIC HINTS.

Simple Method for Diminishing Postanesthetic Sickness.

Dr. E. M. Barker came to the conclusion that postoperative vomiting was mainly due to the nauseating smell of the anesthetic (particularly ether), which often hangs about the nasal cavities for days. To obviate this he applies eau de Cologne on a mask immediately on ceasing the anesthetic, and instructs the nurse to continue to do so for half an hour after the patient is back in bed.

Eau de Cologne does not possess any specific virtue for the purpose, but simply replaces an unpleasant smell with a pleasing one. The results are so satisfactory that the author now practises it as a routine. (Brit. Med. Jour.)

Passion for Pills.

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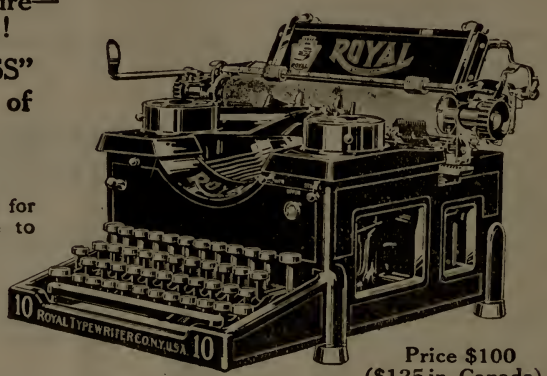

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While most fruits are composed largely of water, in some instances as much as 90 per cent., they still have a food value, largely of starch and sugar. The sugar most abundant in fruits is levulose, or fruit-sugar, which is sweeter than other sugars, and is more easily digested and assimilated than cane-sugar. Fruit-sugar is a predigested food, which is readily assimilated into the blood and speedily becomes effective for nutritive purposes.

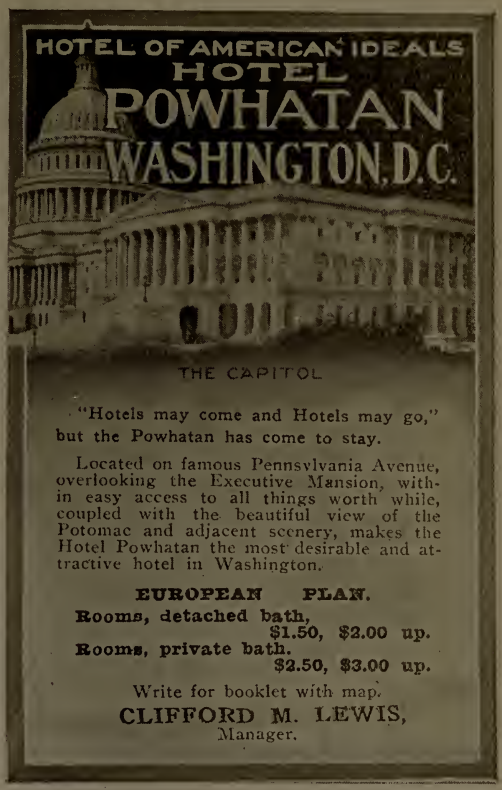
Fruits are rich in salts and acids. The salts of potash predominate, but salts of soda, lime, iron, phosphorus, sulphur, magnesium, manganese, etc., as well as sodium chloride or common salt, are also found. Earthy salts are scarce; hence fruits can usually be given with impunity to those who suffer from degeneration of the blood-vessels. The pleasant, cooling, refreshing properties of fruits are largely due to the acids. Citric acid, one of the most common, as well as one of the most wholesome, is abundant in lemons, limes, citrons, oranges, and grapefruit. Tartaric acid (in grapes) also produces cooling and refreshing effects.

Most fruits, when properly ripened and eaten under favorable conditions, including proper mastication, give little digestive trouble. Fruit juices are most easily digested and assimilated, since their chief contents besides water are fruit-sugar, salts, and acids. Many persons invite digestive troubles by mixing fruit, particularly acid fruits, with milk foods, or by mixing fruits and vegetables. Fruit, either fresh or stewed, always goes well with nuts, breadstuffs, and cereal preparations. It does not assist digestion to eat too large a variety of fruits or other foods at the same meal.

Most difficulties with the digestibility of fruit are due to eating it when unripe or overripe. It is poor economy to buy fruit which is "gone" or is "going." Better pay a little more and get perfectly fresh, sound fruit, and avoid danger of colic or diarrhea. Fruit should be eaten at mealtime with other food. Eating between meals or at irregular times is apt to upset the digestive organs.

There is scarcely a drink more refreshing than freshly made lemonade. The larder should always contain lemons. Lemonade, taken freely, is excellent for those who are developing a cold in the head. Orangeade and the juice of fresh grapes, cherries, blackberries, gooseberries, greengages, pineapples, and apples make delicious drinks, which can be taken with impunity. Cold fruit drinks are most refreshing and cooling to fever patients. Such drinks are always acceptable, and they help lower the temperature and alleviate symptoms.

Non-alcoholic grape wines make a splendid tonic for children suffering from anemia, nervous debility, neurasthenia, and other disorders. Nature's aperient consists of laxative fruit taken freely with meals. The more effective laxative fruits are figs, prunes, grapes, raisins, currants, and dates. The ripe olive is also a very efficient laxative. (Pediatrics.)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Department on the Internal Secretions

Original Articles and Summaries of Selected Articles

THE APPLICATION OF SOME MUSCULAR TISSUES ADAPTED TO PHYSIOLOGIC STANDARDIZATION. STANDARDIZATION OF ERGOT AND PITUITARY PREPARATIONS.

(Continuation of a Previously Reported Study.[1])

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AND

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PHILADELPHIA, PA.

IN a paper read before the American Therapeutic Society last year we presented the results of our investigations into the subject of standardizing ergot by means of its effect upon the isolated uterus. After a brief discussion of the principal objections to the uterine methods formerly employed, we described in detail a method and apparatus which we had devised for testing ergot upon the isolated uterus of the virgin guinea-pig. The paper was supplemented by charts showing the increased sensitiveness and accuracy of the new method as compared with the old ones. Attention was also called to the variation in uteri as to power and muscular structure and to the means of distinguishing active from inactive uteri.

During the past year we have devoted considerable time to a study of the possibilities of employing this method for other purposes.

The marked sensitiveness of the method together with the concordant results obtained by its employment led us to believe that through it we could

perhaps ascertain whether or not the uterine and circulatory actions of ergot run parallel to one another. This is an important factor, since the blood-pressure method is rather extensively used for standardization purposes, its employment being supported by statements that the characteristic effect of ergot is a stimulation of all unstriped muscle tissue of the body, and that the changes in the circulation, in the intestines, and in the uterus are but a part of one general action. The employment of this method has been further supported by the fact that all the substances which have been suggested by various writers as being the active principles of ergot have produced stimulation of the blood-vessels as well as of the uterus. So far as we are able to learn, however, no experimental results have ever been published to show whether or not these two actions run parallel.

We are, therefore, now testing every sample of ergot submitted for assay by both the uterine and blood-pressure methods. By this means we shall be able after a sufficient number of samples have been tested to compare the results obtained and thus determine whether or not a parallelism does exist between these two actions. If on completion of the experiments the results show that all the samples which assay high by the blood-pressure method also assay high by the uterine method we shall know that these actions do run parallel. If, on the other hand, some samples run high by one method and low by the other we shall know that such a parallelism does not exist.

In order to express the activity of the preparations and percentages it is necessary to adopt some provisional standard with which to compare the unknown preparation. After much experience we have adopted the following standard for the blood-pressure method:—

"0.08 c.c. of the fluidextract per kilo, intravenously injected into a series of two or more dogs, should cause an average rise of blood-pressure of 30 mm."

Preparation	Comparative strength by B. P. method	Comparative strength by uterine method
No. 1 F. E.	166%	170%
No. 2 Cornutol	100%	90%
No. 3 F. E.	153%	148%
No. 4 F. E. 5 months old	51%	100%
No. 5 F. E.	224%	230%
No. 6 F. E.	210%	198%
No. 7 F. E.	118%	105%
No. 8 F. E.	80%	100%
No. 9 F. E.	125%	135%

In order that the results obtained from the uterine and blood-pressure method may be compared we have also adopted a fluidextract of ergot of the above strength as the standard for the uterine method. After a fluidextract has been adjusted to the exact strength above stated, it is placed in 4 c.c. vacuum ampoules to prevent deterioration.[2] These can then be opened and used as required.

The foregoing table would indicate that a parallelism does exist between the action of ergot upon the circulatory system and the action upon the uterus. We shall be unable, however, to arrive at a definite conclusion until more data have been compiled; therefore, our investigations along these lines will be continued for another year.

The ever-increasing popularity of the pituitary gland as a medical agent induced us to next direct our attention to methods of standardizing this body.

The rôle which the pituitary body or hypophysis plays in life has until recently been a mystery. It was at first thought that its function was to lubricate the nasal cavities. This belief, however, was soon discarded and replaced by the supposition that the gland was, like the appendix, of no use at all. Later, however, it was proven by Vassale and Sacchi,[3] Caselli,[4] and others that the gland plays a very important rôle and is absolutely necessary to life. It has also been found that acromegaly and other diseases are due to functional disturbances produced by this gland. The similarity between the histologic characters of the anterior lobe of the pituitary and the thyroid has suggested that the pituitary supplied a secretion. This view, defended by Rénon, Launois, Cushing, and others, is the prevailing one. Sajous claims, however, that recently recorded data, together with the facts that an extract of the glandular lobe, the anterior, is inert, while extracts of the posterior or neural lobe, which is not glandular, are alone active, tend to invalidate this view. According to Sajous,[5] the pituitary is not the source of a secretion, but functionally a nervous organ which co-ordinates the activities of the thyroid and adrenals. When toxics of certain kinds occur in the blood they excite the pituitary body and through this organ increase the production of thyroid and adrenal secretions, to which Sajous and others have attributed antitoxic functions. The effects of pituitary extract are ascribed by Sajous[6] mainly to the presence of epinephrin, which, as shown by the chromaffin test, is present in the posterior lobe in firm organic combination.

The knowledge concerning the chemical structure of the pituitary gland is, however, still in its infancy and has only recently gained proportions sufficient to warrant the hope that science will ultimately be as successful in isolating an active principle or principles from this gland as it has been with the suprarenal gland. Owing to the similarity existing between the physiologic actions of the pituitary and those of the suprarenal gland, the theory has been advanced that the active principle of the former will be very similar to epinephrin. In fact, it has been shown that the active principle of the gland can be concentrated into a basic fraction forming salts with acids. Führer,[7] however, has demonstrated that this basic fraction can be split into several fractions. Schäfer and Vincent[8] had also shown some time before

that the blood-pressure-raising principle could be divided into two fractions through the different solubilities of the latter in alcohol, one fraction possessing a pressor and the other a depressor action. These facts would tend to prove that the action of the extracts of the pituitary body is due not to the action of one, but to the combined actions of several active principles.

The pituitary body varies in size according to the age and species of the animal. The gland most commonly used in therapeutics is that obtained from the ox, and is about ¾ inch in diameter.

The gland is composed of two parts or lobes,—the anterior and the posterior, or infundibular. The smaller, or posterior, lobe, which forms only about 10 to 15 per cent. of the total gland, is the more important therapeutically. This lobe contains practically all of the active principle, while the anterior lobe is the one which is so necessary to life.

The total pituitary body contains about 80 per cent. of water, or, in other words, 100 parts of the fresh gland yield about 20 parts of dry substance, containing 2 to 3 parts of the posterior lobe.

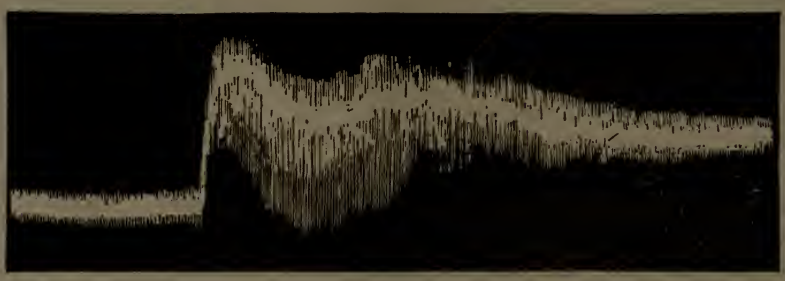

Fig. 1.—Effect of pituitary extract on the blood-pressure. (*From Pittenger's "Biochemic Drug Assay Methods."*)

This gland has become of great interest to the physiologist and clinician. The discovery of P. Marie[9] in 1886 that the disease known as acromegaly is associated with pathologic changes in the pituitary has been followed by other discoveries in relation to the pituitary body that are epoch-making. Oliver and Schäfer[10] in 1894 found that intravenous injection of aqueous or saline extracts of the entire organ produces a marked rise in the general blood-pressure, not so great as in the case of epinephrin, but more prolonged. The action is peripheral and is due mainly to constriction of the arterioles. Magnus and Schäfer[11] and Schäfer and Herring[12] have shown that it accelerates diuresis. Howell demonstrated that its pressor effect is obtained only from extracts of the posterior lobe and that the anterior lobe is physiologically inactive; also that the action is directly on the heart and blood-vessels and not through the autonomic nervous system. The investigations of Dale,[13] Cramer,[14] von Frankl-Hochwart and Fröhlich,[15] and others prove that it causes marked uterine contraction. Ott and Scott[16] found that it exerts a marked galactagogal action. Schäfer and Mackenzie[17] confirmed the findings of Ott and Scott (1910). They used a dried extract made from

the posterior lobe and proved that the galactagogue substance is not present in the pars anterior. An extract of the pars anterior seems to have some stimulating effect upon the sexual development, according to Götsch. Hendley[18] finds it a valuable aid in shortening the long and often exhausting

Fig. 2.—Effect of pituitary extract on the isolated uterus: *A* to *B*, normal; at *B*, 0.01 c.c. of pituitary extract was added. (*From Pittenger's "Biochemic Drug Assay Methods."*)

first stage of labor, especially in "dry" labors. He also refers to it as a powerful remedy in shock and collapse from prolonged chloroform anesthesia. It acts as a calmative in excitement in labor occurring in patients of nervous temperament. It prevents postpartum retention of urine, and it controls hemorrhage.

Frey and Kumpiess[19] state that extract of pituitary prevents postpar-

tum retention of urine. It inhibits urinary flow when first injected, this effect being followed in a few hours by a reactionary polyuria. There is also a relative increase in sodium chloride excreted.

Ebele[20] finds pituitary extract invaluable for the treatment of retention of urine during the puerperium or after operations. This action is exhibited only when the bladder is full. He, therefore, waits sixteen to thirty-six hours after the last micturition before giving an intramuscular injection. When the bladder has emptied itself retention is not again experienced.

Vogt[21] gives the extract in the treatment of postpartum hemorrhage and also as a prophylactic. He finds, moreover, that it aids in the normal separation of the placenta and is of service in retained placenta after miscarriage.

Every valuable drug has some untoward effects and limitations, and it is not surprising that a drug of so much potency is capable of producing harm if not skillfully employed. The following summary, relating to its untoward effect, is taken from the Journal of the American Medical Association, May 2, 1914, where it appears under "Queries and Minor Notes," page 1421. In answer to the question, "Have any bad results on either mother or child been reported from pituitary extract?" the editor says:—

"Stern,[22] Bagger-Jörgensen,[23] and Spaeth[24] report cases of atony of the uterus. Nagy,[25] Spaeth,[26] Malinowsky,[27] and Lieven[28] report cases of impairment and slowing of the heart tones and asphyxia of the fetus. Schneider-Sievers,[29] Calman,[30] and Voigts[31] report cases of collapse, ringing in the ears, and dizziness. Nagy,[32] Schneider-Sievers,[33] and Toepfer[34] report cases of eclampsia. Mackenrodt,[35] Patek,[36] Rieck,[37] Hamm,[38] and Heil[39] report cases of contraction of the dilated uterus. Hamm,[40] Voigts,[41] Mackenrodt,[42] and Malinowsky[43] report cases of tetany of the uterus, and Voigts[44] reports a case of premature expulsion of the placenta. Rieck[45] reports a case of tetany of the uterus following the use of a pituitary extract and concludes that it is not to be recommended as an oxytocic in the home. E. Herz[46] reports a case of rupture of the uterus under pituitrin. Grumann[47] reports complications following the injection of pituitrin consisting of a rectocervical fistula produced by prolonged pressure of the head (for two hours). The mother survived. The child died of sepsis. H. B. Sheffield[48] reports a case of toxic convulsions in the child shortly after birth, in which pituitary extract was used, which disappeared on taking the infant from the breast. He attributes this trouble to pituitary extract which had been secreted in the mother's milk."

Standardization of Pituitary Extracts.

The brief historic review given above, together with the condition under which the product is now marketed, namely, in dose ampoules, the strength of which is not properly defined, demonstrates very clearly the necessity for standardization if uniformity in dose and physiologic effect is to be insured. The scant knowledge of the chemical composition of the gland renders it impossible to ascertain by chemical means the comparative value of two or

more extracts or fractions. It is, therefore, necessary to resort to physiologic assay methods.

There are three physiologic methods of standardization, namely, the actions of the drug upon blood-pressure, upon the uterus, and upon the kidney.

Blood-pressure Method for Standardizing Pituitary Extracts.[49]

"Apparatus Necessary for Experiment.—A large kymograph with manometer arranged for taking blood-pressure tracings on continuous rolls of smoked paper; accurately graduated all-glass syringe; large and small scalpels; small, sharp-pointed scissors; tenaculum; bulldog clamps; small glass cannula; silk ligatures, and a dog board.

"Animals.—Various animals may be employed, the dog, cat, or rabbit; but dogs of medium weight (8 to 14 kilo) give the best results.

"Preparation of Experiment.—First completely anesthetize the animal. Any of the volatile anesthetics may be employed, but since it is of great importance that the blood-pressure does not fluctuate from the action of the anesthetic, it is better to employ the morphine-acetone-chloroform anesthesia as follows:—

"Inject subcutaneously 0.01 Gm. of morphine sulphate per kilo body weight of animal, and forty-five to sixty minutes later give by mouth 1.5 to 2 Gm. of acetone-chloroform (1.5 Gm. for animals weighing 6 to 7 kilo; 2 Gm. for those weighing 10 to 12 kilo, and intermediate weights accordingly). The carotid artery is then exposed and connected with the mercurial manometer. Next an incision about 2 inches long is made over the saphenous vein at its junction with the femoral vein, and the tissues are severed just enough to free about 1 inch of each. These veins are used for making the injections.

"Actual Standardization.—After all preliminary arrangements have been completed about 0.05 c.c. of the standard extract should be injected into the femoral vein. If this produces a rise in blood-pressure less than 24 mm. (12 mm. as recorded by the U-shaped manometer) the dose of the standard extract should be increased. If, on the other hand, the injection of 0.05 c.c. produces a rise of more than 40 mm. the dose should be decreased, as large doses markedly influence the succeeding injections. (See Fig. 3.) After the 'standard dose' of the standard solution is thus determined a 'standard dose' of the unknown solution is injected and the rise in pressure compared with that produced by the standard solution. If the difference is very great the unknown solution is strengthened or diluted as the case may be. The size of the injection is then increased or decreased until that dose of the unknown solution is found which will cause the same rise in pressure as that produced by the 'standard dose' of the standard solution. Occasional injections of the standard solution should be made to show the variation in the reaction of the animal, due to the effects of previous injections. Final equality is secured by injecting alternately a standard and the unknown solutions until the average rise of several consecutive injections is practically equal.

"The fact that the blood-pressure method involves the simplest technique,

together with its satisfactory and almost universal use as a means of standardizing epinephrin and suprarenal extracts, would at first lead one to believe that this method would also be the most satisfactory one for standardizing pituitary extracts. It has, however, serious disadvantages in the latter case. As before stated, the blood-pressure-raising principle can be divided into two parts, one possessing a pressor and the other a depressor action. Prof. Fühner,[7] of Freiburg, has also shown that the sum of the basic principles tested by him caused marked uterine contractions and only a slight pressor action, which was almost completely masked by a marked preliminary depressor action.

"Furthermore, extracts which had been deprived of their depressor action by fractionation with alcohol showed marked pressor effects, while on the other hand, they were sometimes almost entirely free from action on the uterus.

Fig. 3.—Shows the gradual decrease in the rises in blood-pressure produced by repeated injections, of equal size, of pituitary extract. (*From Pittenger's "Biochemic Drug Assay Methods."*)

"Another serious drawback to the blood-pressure-raising method is the fact that the active principles of pituitary extract are not nearly as rapidly oxidized as those of the suprarenal gland and therefore repeated injections of equal sizes produce unequal rises, the subsequent ones generally showing a waning of the pressor action and an increasing prominence of the preliminary depressions.

"Still another objection to the blood-pressure method is its comparatively low sensitiveness; in other words, it requires, in most cases, a rather large variation in the size of the injection to produce a variation in the resultant rise. This latter objection is especially serious when comparing two or more samples for research purposes, in which case a mistake of 20 to 30 per cent. in interpreting the results of an assay may cause a considerable loss of time. The greater sensitiveness of the uterine method is shown by Figs. 4 and 5, which show the results obtained from tests upon both the blood-pressure

and isolated uterus methods, in order to determine which was the better of two pituitary extracts made by different processes. According to the blood-pressure method both extracts showed the same activity, while when tested by the uterine method, which is far more sensitive, 8 minims of one extract proved to be more active than 12 minims of the other.

"It has been shown by Dale and Laidlaw that *methods of standardization based upon the diuretic action of pituitary extracts* are also unsatisfactory because of the tolerance produced by the first injection. They state that if small doses are used in order to overcome this tolerance 'it may be difficult to distinguish genuine effects from the spontaneous variations of urinary flow which occur in almost any experiment, however constant the controllable conditions.'

"The unsatisfactory results obtained by these methods led us to carry out experiments in order to determine whether or not the isolated uterus apparatus

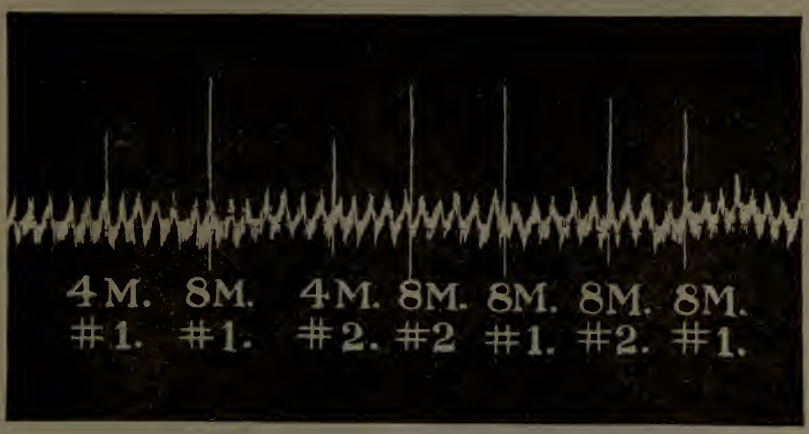

Fig. 4.—Tracing showing equal rises in blood-pressure from equal amounts of the two extracts of pituitary mentioned above. (*From Pittenger's "Biochemic Drug Assay Methods."*)

devised by us for testing ergot would be equally satisfactory for assaying pituitary extracts. The results of these experiments prove this apparatus and method to be even better adapted to testing pituitary extracts than for testing ergot. The details of the test follow.

"Isolated Uterus Method of Standardizing Pituitary Extracts.—The action upon the isolated uterus has, in the hands of most workers, proven to be a very satisfactory method of valuating pituitary extracts. By this method a small uterine muscle is suspended in a comparatively large volume of oxygenated Ringer's solution, which can be readily removed and replaced by a fresh volume. This gives a much better chance, than presented by other methods, for the tissue to recover its original condition by the rapid washing out of the principle or the reduction of its concentration to below the threshold of activity.

"Apparatus Necessary for Experiments, Animals, Method of Injecting, Preparation of Experiment, and Technique.—Same as described in introductory paper presented last year under the heading 'Isolated Uterus Method for Standardizing Ergot.'[1]

"Preparation of Standard Solution.—Due to the variation in susceptibility of the different uteri, this method must essentially be comparative and not absolute. This necessitates the adoption of an arbitrary standard with which the activity of the unknown can be compared.

"This is a point on which some generally acceptable convention is ultimately to be desired, but further experience with the conditions of stability is

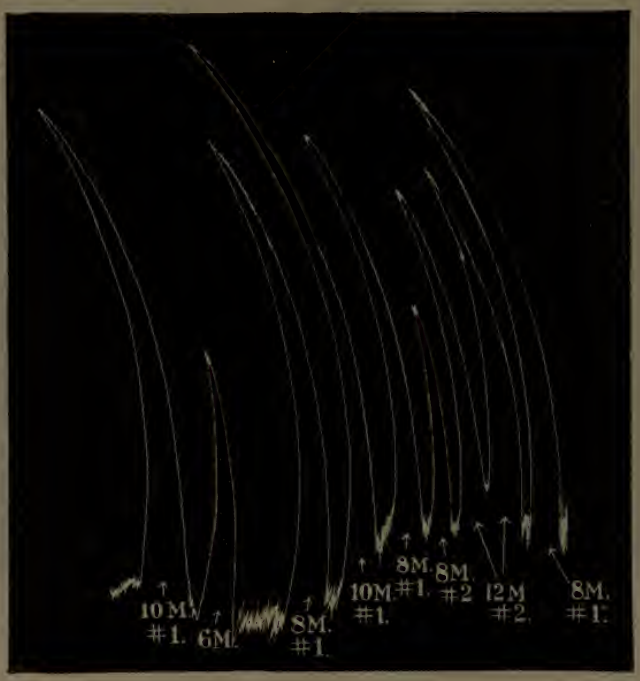

Fig. 5.—Tracing proving the sensitiveness of the uterine method. Chart shows 8 minims of extract No. 1 to be stronger than 12 minims of extract No. 2. By the blood-pressure method (owing to its lower sensitiveness) both preparations show the same activity. (*From Pittenger's "Biochemic Drug Assay Methods."*)

needed before any definite recommendation can be given. Schäfer and Herring state that the fresh infundibular substance, dried at a low temperature, is indefinitely stable, and it may be that ultimately a freshly prepared decoction of such a dried material will prove to be the best standard of reference. But Schäfer and Herring's statement was evidently based on general impression—the effects produced, that is to say, did not become obviously weaker on the average. The question is by no means a simple one, for no absolute reference exists, on the one hand, which can be with certainty reproduced, while, on the other hand, the available methods of evaluation are essentially com-

parative. The variation in the responsiveness of different individuals, or different isolated uteri, is very wide, so that neither the minimal effective dose nor the magnitude of response to a dose of standard size gives any useful information. For the present we use as a standard the extract prepared by a brief boiling of the perfectly fresh and finely pounded infundibular material with a definite proportion of acidulated water, so as to produce a 10 per cent. or 20 per cent. extract of the fresh moist substance. The extract is then sterilized by brief autoclaving in small phials. Some activity is lost in autoclaving, but the preparation thereafter has great stability. The use of small phials, of which one can be used for each test, obviates repeated sterilization, which is inadmissible. At frequent intervals a new batch is chosen which has an activity equal to or just perceptibly greater than that of the former standard, so that the possibility of a very slow lowering of the standard is eliminated, though we have as yet no evidence of deterioration under such conditions (Dale and Laidlaw).

"*Actual Standardization.*—After the uterus has been placed in the apparatus and has attained the condition of uniform low tonus, a small dose (about 0.01 c.c.) of the standard extract is pipetted into the Ringer solution in which the uterus is suspended. If all conditions are ideal the uterus, which was recording small, rhythmic contractions, will now forcibly contract and record its contraction by a long, sweeping curve. The dose should be sufficiently large to produce a nearly but not quite maximal tonus. If this initial dose of the standard extract produces a maximum tonus the drugged solution should be quickly removed and replaced by fresh Ringer's, after which a smaller dose is tried. If, on the other hand, the lever after rising to a position of partial tonus falls again and a wide rhythm ensues, the dose is too small. In such cases the solution should be changed and after about ten minutes at minimal tonus larger doses should be tried. If, however, doses of 0.03 c.c. do not produce tonic contractions, the uterus should be discarded and replaced by another. After thus determining the 'standard dose' of the standard extract, a 'standard dose' of the unknown extract should be given and the resultant contraction compared with that produced by the standard extract. If the difference is *very* great the unknown solution is strengthened or diluted accordingly. The size of the injections is then increased or decreased until that dose of the unknown is found which will cause a contraction of an amplitude equal to that produced by the standard. Occasional injections of the standard solution should be made to insure constancy in the reaction of the uterus. Final equality is secured by injecting alternately the standard and the unknown extract until the average amplitude of the curves produced by several consecutive injections is practically equal.

"It is not necessarily significant that there occur a slight variation in the amplitude of the curves produced by two successive doses, as a second equal dose of the same preparation will frequently give a contraction of slightly greater amplitude than that produced by the first dose, or may, on the other hand, produce a slightly smaller one. The uniformity of result is more nearly complete with some uteri than others. The uniformity depends to a consider-

able extent on the *uniformity of interval between the doses,* so that the first dose of a group, either at the beginning of the experiment, or at a later stage following a prolonged interruption, tends to produce a slightly abnormal result in one direction or the other. The succeeding doses, however, generally give concordant results. On the other hand, it is inadvisable to give a long

Fig. 6.—Demonstrates the concordant results obtained from repeated doses of an equal amount of pituitary extract. (*From Pittenger's "Biochemic Drug Assay Methods."*)

series of doses at short intervals, as this produces a gradual decline in the sensitiveness of the uterus. It is advisable, therefore, when making a series of comparisons, to give a group of four or five doses at about ten-minute intervals, then allow an interval of about one-half hour or so and then follow with another group, regarding the first member of each group of curves as probably abnormal. Good uteri will give reliable results for eight to ten hours after being excised and placed in the oxygenated Ringer solution.

"This method is by far the best so far proposed for the standardization of pituitary extracts, as differences of activity which are only just appreciable by the blood-pressure method, under the best conditions, are at once obvious in the test on the uterus without any special care in controlling the regularity of the response."

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ACROMEGALY APPARENTLY UNILATERAL.*

By E. LACAILLE, M.D.,

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While most giants and acromegalics that have come under the author's observation have been of symmetric build and features, he has come across 3 cases—one reported twelve years ago—in which there was apparently an asymmetry of the acromegalic process on the two sides. In one of the cases now reported, one hand is about 1 cm. longer than the other, and the corresponding forearm 2 cm. longer than its fellow. The second case, which the author was able to study more closely, was that of a man aged 52, an attaché of the French Embassy in Pekin. Until the age of 50 nothing unusual was noted, but in the last two years the patient noticed his right arm and hand growing longer, and the hand also broader. The distal extremities of the metacarpals present a fusiform appearance in the X-ray pictures; this appearance is considered by many characteristic of acromegaly. The face also shows signs of the disease, viz., broadening of the malar prominences and the median eminence of the forehead, *i.e.*, of the maxillary and frontal sinuses. Left and right lateral X-ray pictures of the head show that, while the enlargement of these sinuses has been almost the same on the two sides, the shadow on the right side of the sella turcica is not equivalent in size or shape with that on the left. It seems clear that the pituitary fossa is larger on one side than the other, and it seems warranted to conclude that the portion of the pituitary occupying the one side is larger than that in the other. The side on which the sella turcica is larger is the opposite of that on which the lengthening of the arm was noted. Marked asymmetry has been noted in cases of achondroplasia, but in the present patient, 52 years old, the changes were only of two years' standing, and there could be no question of achondroplasia.

* Summary of article in Bulletins et Mémoires de la Société de Médecine de Paris, April 10, 1914.

THE EFFECTS OF ADRENAL MASSAGE ON BLOOD-PRESSURE.*

By R. G. HOSKINS, Ph.D.,

AND

CLAYTON McPEEK, M.D.,

COLUMBUS, O.

Cannon and Lyman have conclusively proved that, in the cat at least, when blood-pressure is at a normal height, injections of pure epinephrin in minute dosage and at the proper rate invariably produce a depression of blood-pressure. This effect can be secured time after time. If initial tension is low, however, only an augmented pressure can be secured. Hoskins and McClure have reported that in the dog also the effect of minute doses of epinephrin (adrenalin) is characteristically a fall of pressure. The assumption that epinephrin circulating even in minute (physiologic) quantities does have a pressor influence is the basis of a widely held theory that an important function of the adrenals is to maintain a tonic activity in the vasomotor system, or, indeed, in the sympathetic system as a whole. So far as the cat is concerned, the matter is conclusively determined. Similarly conclusive evidence should be obtained as regards other animals. The authors therefore decided to investigate further in the dog the vascular reactions to adrenal stimulation, noting particularly the effects of varying the strength of stimulus.

It was necessary to devise some way of stimulating the glands during conditions of normal pressure without, at the same time, unduly stimulating any of the intact contiguous nerve fibers. Stewart having called attention to the fact that massage of the adrenals readily causes an augmented epinephrin secretion, it was decided to make use of this fact to secure adrenal discharge. With careful manipulations, massage sufficient to affect the adrenals can be applied in the region of these glands without causing any significant influence on blood-pressure, due to stimulating other structures. It proved also necessary to work very carefully to prevent a premature exhaustion of the available epinephrin. Anesthesia, asphyxia, violent emotions, and sensory stimulation, all had to be reduced to a minimum. A dog of quiet temperament was etherized with as little excitement or asphyxiation as possible. Then, after it was strapped to an animal-holder, urethane was given by stomach-tube, about 2 Gm. per kilogram, and the ether discontinued as the urethane became effective. A cannula was inserted into one of the carotid arteries and connected with a recording mercury manometer. An incision about 2 inches long was then made through the body wall in the region of each adrenal. Through these a finger or finger and thumb could be inserted and the adrenals carefully massaged.

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* Summary of article in the Journal of the American Medical Association, June 7, 1913.

The results secured confirmed the earlier observations on the effects of varying dosage of epinephrin, ranging from marked depression with a small discharge, to considerable rise of pressure when the glands were vigorously manipulated. In no case, however, was there secured a rise of pressure at all comparable to that following the ordinary therapeutic dosage of epinephrin. Where a maximal discharge was obtained, it continued for about four minutes after the massage had ceased. In experiments starting with a mean blood-pressure of 120 mm., very dilute solutions of epinephrin gave a pronounced fall of pressure. When in the same dog, however, the initial tension was 40 mm., only purely pressor effects could be obtained.

These results, as well as those of Cannon and Lyman, add support to the conclusion that adrenal secretion cannot be an immediate factor in normal blood-pressure. There can be little doubt that the injection or discharge of epinephrin in gradually increasing amounts will result first in an augmentation of any physiologic effect that normally circulating epinephrin might be producing. It follows that since the first effect of such injection is depression, the adrenals have normally either no immediate influence or else have a depressor effect on arterial tension. It is only when a distinctly abnormal quantity is used that a hypertension occurs. Support for the same conclusion is also derived from the fact, reported by Hoskins and McClure in 1912, that epinephrin injections bring intestinal peristalsis to a complete standstill in dosages inadequate to raise blood-pressure. A mechanism that could promote vascular tension only at the expense of intestinal stasis would be obviously futile.

Explanation of the low blood-pressure in experimental adrenal deficiency or in Addison's disease is to be looked for, therefore, not in the failure of a normal tonic stimulant to the sympathetic system, but probably in an interference with muscular metabolisms, including those of the heart and arteries.

DUCTLESS-GLAND EXTRACTS IN RELATION TO EAR AFFECTIONS.*

By H. Y. McNAUGHT, M.D.,

SAN FRANCISCO, CAL.

Reik and Downey have stated that they believe one of the chief causes of tinnitus to be low blood-pressure, and they have used epinephrin as a blood-pressure-raising principle, apparently with good results in some cases. The author found likewise that the blood-pressure is usually low, often subnormal, and seldom high in tinnitus aurium, but does not believe that this low pressure has any causative relation to the tinnitus. That the results obtained by Reik and Downey were due to the pressure-raising effect is negatived, according to the author, by the fact that the drug was administered by

* Summary of article in the California State Journal of Medicine, November, 1913.

the mouth. The improvement, then, must have come from the circulation of the epinephrin in the blood rather than from a pressure-raising effect. Furthermore, the author found many patients whose symptoms disappeared under thyroid medication. The blood-pressure was taken at intervals, and though it was usually low to start with, it was still lower when the symptoms had disappeared.

As a good working basis for the use of ductless-gland extracts in ear affections the author advances the theory, supported by Beebe's conception of the thyroid function as that of a metabolic detoxicator, that tinnitus aurium can be caused by toxins irritating either the auditory centers or the cochlear nerve or its endings, and that such toxins may be produced by a lack of some one or more of the ductless-gland secretions. Deafness is known to occur in cretins, and to improve under thyroid. G. Bruhl has recently stated that, having used thyroid treatment himself, he was led to infer, after several successful cases, that there exists a connection between function or loss of function of the thyroid and the organ of hearing. The outlook along these lines is encouraging and should stimulate more research on the part of others.

The author reports a series of cases in which thyroid, parathyroid, and thymus extracts were used. As "cured" cases are classified those who had ceased to notice their tinnitus, and as "practically cured" those who noticed it only slightly at times, often at long intervals. Of course, a cured case, in the strict sense of the word, is one whose tinnitus has absolutely disappeared. But that one can ever attain this result the author doubts, inasmuch as even normal persons have a certain degree of tinnitus at all times.

Forty-six cases were treated. Some of these failed to report after the first visit, so the number observed was less. Of 13 cases of chronic catarrhal otitis media, 5 were cured, 2 practically cured, 2 much improved, 2 taken off treatment, and 2 slightly improved. In 1 case of chronic purulent otitis media there was no change in the tinnitus. Of 8 cases of internal ear disease, 2 were cured, 1 practically cured, 2 much improved, 1 unchanged, and 2 slightly improved. Of 7 cases of tubotympanic catarrh, 6 were practically cured and 1 much improved. In 7 cases of otosclerosis and 1 of tinnitus in a normal ear there was no change, and in 1 of chronic adhesive process slight improvement. Many of these patients also reported improved hearing as a result of the treatment. A number of them had exhibited before treatment signs of hypothyroidism, such as dry skin and harsh, dry hair. In no case was the weight lowered under thyroid or parathyroid extract. The author urges others who may try such treatment, however, to exercise care and judgment in the use of these powerful drugs, as they may do harm when abused of.

A CASE ILLUSTRATING DUCTLESS-GLAND RELATIONSHIP.*

By EMMET J. MULLALY, M.D.,

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There is a large number of cases which, while they do not show pronounced symptoms of disturbance of any of the ductless glands, yet are far from perfect health. Thus, a female with little or no enlargement of a thyroid lobe may become unduly nervous and irritable, particularly at puberty, during pregnancy, or at menopause, and perhaps have periods of sleeplessness or diarrhea, and yet have none of the other symptoms which one associates with Graves's disease. Or, dyspnea on the slightest exertion may develop in middle-aged patients, often without cough or cyanosis; the pulse becomes rapid and irregular, the tension high, the vessels sclerosed, and there is no history indicating an infection leading to valvular changes. The author's case illustrates the latter type:—

Mrs. S. B., aged 65 years, was admitted to the Royal Victoria Hospital with normal temperature, pulse 164, and respiration 36. Her complaints were shortness of breath, palpitation, and pain over the heart, eructations of gas, tremor of the body, weakness, and sleeplessness. For three years she had had a fine tremor of the hands, later of the head, gradually getting worse. Dyspnea was experienced on the slightest exertion. Three months prior to admission her appetite had failed. Five years before she had had symptoms akin to those of nervous prostration. There was hypertrophy of the right lobe of the thyroid, the time of onset of which was not certain, as her attention had never been directed to it; there was no exophthalmos. Occasionally she had attacks of dizziness. She had no cough nor cyanosis. She had a marked kyphosis, and edema of the feet and legs was quite evident. Her pulse was irregular and of high tension; vessels somewhat sclerosed. There were murmurs heard at the apex and over the tricuspid area. She remained in the hospital six weeks, and during that time improved considerably, although her pulse rate only got below 100 on one or two occasions. She returned in about two months, in a much worse condition. Her pulse could hardly be counted at the wrist, but the trembling so apparent at her first visit had disappeared, appearing only when she was excited. She had less nervousness, but more weakness. No cough, but marked dyspnea. The edema was more marked, involving the legs and abdominal wall, and she also had dullness at the base of the lungs. She died following a severe localized infection of the left leg, which developed two weeks after multiple punctures had been made to relieve the edema.

There was found at autopsy a dilatation of the heart; some atrophy of the heart muscle but no fibrosis, and slight thickening of the mitral valve. A terminal edema was present, as well as marked hydrothorax. The pancreas weighed only 70 Gm., was firm and pale, and microscopically showed fibrosis. The thyroid was twice the normal size; the right lobe was partially divided into two smaller lobes by a deep notch at one pole, and, when cut into, presented a rather unusual appearance, the central portion being occupied by a small, irregular, calcareous nodule, in the immediate vicinity of which was a rounded, encapsulated portion occupying over one-third of the entire lobe and which had undergone fibrohyaline degeneration. This

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* Summary of article in the Canadian Medical Association Journal, January, 1914.

fibrohyaline tissue was seen in thin strands throughout the entire organ and enclosed rounded adenocolloid portions of thyroid. One could hardly escape the conviction that the fibrohyaline center represented the original thyroid tissue, while the adenocolloid collections at either pole represented more recent additions. The left lobe appeared much more normal. The adrenals were both quite large; the left, which was the larger, measured 7 x 1.5 cm. The cortex was moderately pale and a little thinner than normal, but there was a remarkably large amount of dark-colored medulla, which formed the main mass of the organ. The right adrenal showed the same characteristics. The microscopic sections showed a thickened capsule, hypertrophy of the cortical layers, and well-marked chromophile cells in the medullary portion. The ovaries were atrophied and fibrosed, and the uterus showed a number of fibroids, a few of which had undergone calcareous degeneration.

The adrenal hypertrophy in this case is of interest, and leads one to wonder at the enlargement of the medulla of the organ and to question whether some of the symptoms in the case were not modified or caused by this abnormality. A plausible, but unverifiable interpretation of the events is that some time after the menopause, when the ovarian secretion became diminished or changed, the relationship between the ovary and the thyroid asserted itself, and the latter hypertrophied. There is the possibility that some reflex supplied by the fibrocalcareous changes in the uterus may have induced this unusual occurrence.

Clinically, the patient had all the usual symptoms of exophthalmic goiter except the exophthalmos. The condition had existed for some years, long enough to bring about the dilatation of the heart chambers, and all the secondary changes in the liver, kidneys, etc., consequent upon a poorly working organ. While at autopsy extensive areas in the thyroid were found indicating an atrophic state following upon former activity, tissue was also present highly suggestive of the changes noted in the exophthalmic thyroid.

It is difficult to assign to the enlarged adrenals their share in the production of symptoms. In disorders of the ductless glands the adrenals are frequently affected. Their undue enlargement has been noted in acromegaly and exophthalmic goiter, and their relation to the sexual glands is well known. It is probable that in the author's case above outlined the secretion from the enlarged adrenals increased the blood-pressure. The marked arteriosclerosis was possibly due to increased adrenal secretion.

THE PATHOLOGY OF THE THYROIDS FROM CASES OF TOXIC NON-EXOPHTHALMIC GOITER.*

By LOUIS B. WILSON, M.D.,

ROCHESTER, MINN.

Plummer has recently called attention to the fact that, clinically, there are two distinct groups of toxic goiters: one exophthalmic, and the other

* Summary of article in the Journal-Lancet, February 15, 1914.

toxic non-exophthalmic. The former, the author (Wilson) has demonstrated pathologically, all show primary hypertrophy and hyperplasia of the parenchyma as the dominant pathologic change in the thyroid. On the other hand, practically no cases of toxic non-exophthalmic or of non-toxic (*i.e.,* simple) goiter observed showed any such pathologic change. Thus, the evidence of the constant association of primary hypertrophy and hyperplasia of the thyroid gland with the symptoms of true exophthalmic goiter would seem to be fairly conclusive. The author's present communication deals in part with the pathology of the thyroid in cases of toxic non-exophthalmic goiter.

Fifty per cent. of the thyroids from 373 toxic non-exophthalmic cases comprised in the author's clinical group 2 (those which resemble more or less the true exophthalmic goiter cases) showed marked evidences of regeneration of the parenchyma. Regeneration of previously atrophic parenchyma of the thyroid is often a marked process, which can usually be differentiated from primary parenchymatous hypertrophy and hyperplasia by (*a*) the abundant presence of atrophic parenchyma within large acini; (*b*) the development of numerous new acini within one or more portions of the walls of the old large colloid-filled acini, and which early fill with dense colloid, and (*c*) the development of multiple layers of relatively small parenchyma cells within the large colloid-filled acini, which are to be distinguished from primary parenchymatous hypertrophy and hyperplasia by the smaller size of the parenchyma cells and the absence of papillæ.

Seventeen per cent. of the thyroids from the positively toxic cases in clinical group 1 (*i.e.,* those in which the clinical picture appears to be the result of a cardiac toxin) were of the regenerative type. Though this percentage is but one-third that of the preceding group, it is still nearly twice that shown by the thyroids of doubtful toxicity, and by the atoxic (simple) goiters, which gave the same (9 per cent.) in the regenerating class.

Twelve per cent. of the thyroids from the toxic non-exophthalmic cases of clinical group 2 were early fetal adenomas, and 33 per cent. degenerating fetal adenomas, making 45 per cent. in which the pathology was that of encapsulated adenomas made up of acini largely of lumenless type. This leaves but 5 per cent. of the cases in clinical group 2 in which the pathology of the thyroid was that of colloid goiters with adult parenchyma. This is in strong contrast to the distribution of the thyroids in the toxic cases from clinical group 1, in the positive ones of which only 7 per cent. of the thyroids were early fetal adenomas and 14 per cent. degenerating fetal adenomas, while 62 per cent. were colloid goiters with adult parenchyma.

The average age of true exophthalmic goiter patients at the time of the removal of the thyroid was in Plummer's cases 25 years in those cases in which the parenchyma of the thyroid was found to be in an early stage of primary hypertrophy and hyperplasia, 31.7 years in those cases in which it was in an advanced stage of primary parenchymatous hypertrophy and hyperplasia, and 40.7 years in those cases in which it showed regressive changes secondary to primary hypertrophy and hyperplasia of the parenchyma. In general, it may be said that patients with non-exophthalmic goiters come to operation

before they have developed their toxic symptoms at an average age of from 31 to 40 years, according to their pathologic classification, while patients with toxic non-exophthalmic goiters come to operation at an average age of from 32 to 52 years according to their pathologic grouping.

The average duration of goiter before operation in the cases of true exophthalmic goiter was 0.3 year for those in which the thyroid showed early primary parenchymatous hypertrophy and hyperplasia, 0.9 year in those with advanced primary parenchymatous hypertrophy and hyperplasia, and 3.5 years in those with regressing primary parenchymatous hypertrophy and hyperplasia. In the toxic cases of clinical group 2 the goiter had existed 6.9 years; in those with thyroid regeneration, 4.4 years; in those with early fetal adenomas, 12.6 years; in those with degenerating fetal adenomas, 5 years, and in those having colloid goiters with adult parenchyma, 14 years.

The average weight of the portion of gland removed is, in general, a fair relative index of the total size of the thyroid. Examination of the average of these weights for thyroids in the different groups shows that of those from cases of exophthalmic goiter, those with early primary parenchymatous hypertrophy and hyperplasia are the smallest (38 Gm.), those with advanced primary parenchymatous hypertrophy and hyperplasia considerably larger (61 Gm.), and those with regressing primary parenchymatous hypertrophy and hyperplasia smaller than the preceding (51 Gm.).

The cases of toxic goiter of clinical group 1 (*i.e.*, those in which the symptoms are of the cardiovascular variety) much more closely resemble cases of simple goiter in their pathology in all respects than do the cases of clinical group 2. A larger number of them are of the colloid-goiter type; the enlargement of the thyroid has existed for a longer period before operation, and the portion of the gland removed is materially larger than in those cases of clinical group 2.

All the above pathologic evidence points to a constant relative association of increased secretion and increased absorption from the thyroid, proportional to the degree of toxicity exerted in the patient. One has as yet no absolute proof that such secretion and absorption is the actual cause of the symptoms, but the evidence available strongly points to that conclusion.

Abstracts from Current Literature on the Internal Secretions

Operative Technique in Graves's Disease.—A technique that will carry an advanced exophthalmic goiter case through an operation without increasing the pulse rate can be followed either in ligation or lobectomy.

Ligation should be performed without removing the patient from bed. Nitrous oxide and oxygen may or may not be administered, but

according to the author's procedure the brain is always protected by a complete local blocking with novocaine during the operation and a complete quinine and urea hydrochloride infiltration at the close of the operation. Where lobectomy is to be performed, the patient is anesthetized with nitrous oxide oxygen in bed. Fictitious anesthesia having been given under the guise of treatment for several days previous to the operation, the patient when anesthetized is free from psychic strain, as he is under the impression that he is receiving an inhalation treatment.

When anesthetized, the patient is taken to the operating room. The division of tissue is preceded by a blocking so complete that no activating impulse can reach the brain. Before the wound is closed every part of the field is completely blocked by quinine and urea hydrochloride injected with a hypodermic needle. The patient is kept unconscious, under anesthesia, until he has returned to his room and until his room has been restored to its condition when administration of the anesthetic was begun. Since in the course of the cycle from his room to operation and return his brain has received no active stimuli, there can be no change in the pulse. No record of the operation has been written either upon the subconscious or the conscious brain. Besides, the postoperative hyperthyroidism is prevented or minimized, and the later clinical results are improved to the same extent as are the immediate results.

When a case of Graves's disease is subjected to a heavy nervous strain or to intense worry, the disease is aggravated for weeks or for months and not infrequently death results. The evil effects of the stress of facing the operating room are not only seen immediately, but are perpetuated on the following days and weeks and months by their frequent recall. From this handicap the "anoci association" patient is free, and by so much the convalescence is speeded on its way.

In carrying out the details of "anoci" the surgeon must re-educate himself; his assistants must be especially trained; in short, in the patient's entire cycle of entrance, operation and exit, there must be no sharp points of contact, either psychic or physical. Those who have had training in local anesthesia will find the details easy. The technique will reach its purpose only if rigidly carried out.

Graves's disease is due to a disarrangement of the general motor mechanism whereby the threshold of the brain to both psychic and traumatic stimuli has been lowered in varying degree. The stimulus which in the normal individual would cause no appreciable change in pulse or temperature will, in cases of Graves's disease, drive the brain and body so fast that greatly increased motor activity and a rise in temperature are caused. Anything, therefore, that raises the threshold of stimulation of the brain must diminish the susceptibility to pulse and temperature changes in the patient suffering from Graves's disease as well as in the normal individual. This explains why patients under morphine or in a stupor show little change after excitation, and why an operation performed under "anoci" is followed by diminished or no aseptic fever and

in Graves's disease by no so-called "hyperthyroidism." George W. Crile (Cleveland Medical Journal, August, 1913).

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Pathologic Changes of the Thyroid in Disease.—The object of the author's paper is to point out those diseases and toxemias that do and those that do not produce an alteration in the thyroid, to describe the pathologic changes, to compare them with those seen in goiter, and to note when these changes are associated with signs of thyroid excess. The work is based on some 700 thyroids of man and guinea-pigs collected from post-mortem examinations.

The first change the thyroid undergoes as the result of acute toxemia is an alteration in the colloid material. It loses its staining capacity, becomes granular and vacuolated, and finally disappears. During this change the gland is congested, with perhaps intervesicular hemorrhage. The walls of the empty vesicles become plicated, the short or fat epithelial cells lining the vesicles become high cubical, and finally columnar, and greatly increase in number. The plication of the walls and the cell increase go on until the vesicles, as such, are indistinguishable; during the transition the appearance is given of villous processes growing from the walls of the vesicles. When the hyperplasia is complete, the gland is hypertrophied, but its store of secretion is exhausted. The distinction between the acute and the complete hyperplasia is that in the acute the intervesicular hemorrhage is the most marked feature; the cell and vesicular changes have not progressed as far as that seen in the complete. The length of time that the gland takes to undergo a complete hyperplasia varies with the toxemia and its intensity; the whole change may take place in twenty-four hours. So certain is this hyperplasia that the thyroids taken from any one of these acute infections can be arranged in the order of the duration of the disease as it corresponds to the degree of hyperplasia, allowance being made for the very acute infections which can be noted by the extreme degree of intervesicular extravasation.

Acute toxemia thus causes a cycle of thyroid changes. First there is an acute hyperplasia in which the gland becomes hypertrophied and exhausted; when the toxin is overcome the gland involutes back to normal, but the effect of the toxemia is evident by the diminution of thyroid tissue and the intervesicular fibrosis. In the less acute toxemia the cell hyperplasia is more marked.

There are three characteristic stages in chronic hyperplasia: (1) When the vesicles are of equal size, the colloid being partially absorbed and coarsely granular, and the cells are proliferated; (2) when the vesicles are of unequal size and packed with colloid, with cell hyperplasia between them, and (3) when the gland is cirrhotic, with deficiency of thyroid tissue. R. Farrant (British Medical Journal, February 28, 1914).

* * *

The Internal Secretions and the Female Characteristics.—The ovaries alone are not responsible for the female characteristics. Al-

though the potentiality to produce femininity exists in the earliest stages of segmentation of the ovum, this potentiality is directed toward the future development and correlations of the endocrine glands which are to control the sexual evolution of the individual. It has been shown that the suprarenal cortex is largely responsible for the secondary sexual characteristics. Although the genitalia may be normal morphologically at birth (primary development), they became functionally active only at puberty (secondary development) if the whole endocrinous system is in perfect harmony and acting efficiently. Thyroid or pituitary insufficiency may cause the genital organs to remain infantile, and disease of these structures may cause retrogression in the genitalia even after they have functionated normally. Removal of the thyroid alone produces an intense degree of atrophy in the uterus. The ovaries, however, do not retrogress; on the contrary, there appears to be increased activity, especially in the follicles. While adrenal hypernephromata in male children are practically always associated with precocity of the sexual organs and secondary characteristics, in female children with adrenal hypernephromata the sexual organs are not precociously developed, for the tendency is rather to produce in them the characteristics of the male—a deep voice, enlargement of the clitoris, hirsuties, etc.

An excessive ovarian secretion leads to an increase in sexual activity both locally and generally. The local effects may be seen in an increased and prolonged menstruation. An excessive ovarian secretion affects the metabolism in the opposite way to oöphorectomy, and one of the most important metabolic disturbances is the abnormally large excretion of calcium salts. Bossi suggested the injection of epinephrin as an alternative to oöphorectomy. Apparently many cures have been effected by this treatment, and also by the injection of pituitary extract.

Thyroid insufficiency always causes a decrease in or complete cessation of the function of menstruation, according to the degree insufficiency of pituitary secretion is associated with amenorrhea or scanty menstruation. An excess of pituitary secretion, such as occurs in acromegaly, produces masculinity, and while in the male this may give rise to excessive sexuality, in the female it causes amenorrhea and loss of desire, as is only natural if masculinity be produced. Blair Bell (British Medical Journal; Charlotte Medical Journal, February, 1914).

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Chemical Consequences of the Removal of the Parathyroid Glands.—The discovery of toxic bases in large quantities in the urine of parathyroidectomized dogs is reported by the author. In every animal studied methylguanidin was present in the urine. When this substance was found in smaller quantities, other guanidin bases were present, so that the excreted guanidin nitrogen approached a constant. In addition to these cases others were observed, namely, betaimidazolylethylenamine, choline, neurine, and unidentified bases, although these were not distributed uniformly in the cases studied.

The histologic picture in the tissues of parathyroidectomized animals is one of cellular disintegration, particularly in such organs as the liver, kidney, and brain. Various degrees of chromatolysis are observed in the nuclei, and in some places the latter disappear entirely in large areas. The passive protein destruction which must accompany such tissue changes may give rise to basic products and thus account for the unusual compounds excreted.

Inasmuch as in animals which have been thus operated on the specific toxic symptoms can be provoked by the feeding of digested protein, it may be that the toxic effects are initiated by products of intestinal or even of parenteral digestion. Normally these derivatives are incorporated in some cell molecule or stored up in some form. In the case of parathyroidectomized animals, after feeding digested proteins, the products perhaps remain free and act as toxins. In animals operated on without further feeding, however, the symptoms increased in violence with short intermissions until death. The intensity of the symptoms doubtless corresponded with the rate of disintegration of body protein.

The pathologic condition resulting would thus appear to be a failure on the part of the cells to build up their protein. This part of the metabolism of the cell being generally regarded as the function of the nucleus, the changes found, together with the formation of free nuclein components, point to a nuclear atrophy. The histologic findings, moreover, show an active nuclein degeneration. Thus, it would appear that the parathyroid secretion is concerned with anabolic processes related to the synthesis of nuclear contents. W. F. Koch (Journal of Biological Chemistry, July, 1913; Journal of the American Medical Association, September 27, 1913).

* * *

Hyperthyroidism.—It has been demonstrated that 5- to 10- grain doses of thyroid gland will relieve some of the toxemias of pregnancy. The author has had brilliant results follow the administration of thyroid in some cases of vomiting of pregnancy. Besides, following its administration, the nervous symptoms of the menopause disappeared. That the thyroid is entitled to be termed a sex gland is evidenced by comparison of the conditions following thyroidectomy and following the climacteric. The author considers that a majority of the cases of girls from the eighth grade and the first year in the high school who are nervous and choreic are cases of hyperthyroidism. Thus, he had under observation a girl from the eighth grade who menstruated three times at two-week intervals, and was brought to him for the relief of nervous symptoms. She was unable to control herself in her recitations, clumsy in her movements, never quiet, talked loudly, and had a pulse of 120, together with marked tremor, palpable thyroid, and headache. The palms of the hands were always sweating. In spite of the patient's youth, this was probably a case of hyperthyroidism.

Some have claimed that a diagnosis of hyperthyroidism should be

made whenever there is present for a considerable time a tachycardia which cannot be explained upon any other pathologic theory provided several of the minor symptoms, though neither exophthalmos nor goiter, are present. In 2 cases the author was able to make such a diagnosis, which was later confirmed, in one case by exophthalmos and goiter, and in the other by exophthalmos.

The author has seen one case in which trauma seemed to have been a causative factor. A girl 12 years old, in playing ball, was struck in the neck. In a few days she developed a considerable goiter, which continued for some time without any hyperthyroidism, when rather suddenly, after three months, she developed violent symptoms of hyperthyroidism. The thyroid secretion had probably been blocked in the lymph-channels and then set free in a very large dose. B. S. Walker (Iowa Medical Journal, February, 1914).

* * *

Surgery of the Hypophysis.—The surgery of this organ is commanding the attention of the rhinologist because of the more easy approach to the pituitary body through the nose, entailing less mutilating operations than by the intracranial methods. Considerable difficulty may be encountered, however, because of the inconstancy of the anatomic relationship of the sella turcica and the sphenoidal sinuses. The fact that the septum dividing the two sinuses is seldom in the median line may be a source of considerable trouble. The sphenoid cavities may be approached by the palatine route, as proposed by König; or the endonasal route, as suggested by Hirsch. West and Citelli have each suggested a method, somewhat similar in approach to that proposed by Hirsch, but entering at the side. Any deviation from the median line increases the danger of these operations because of the important structures in the neighborhood. The palatine route necessitates a central incision through the velum, and the removal of the horizontal plate of the palate bones and posterior part of the septum. The sphenoidal sinus is then opened in the median line by destroying the bifurcated edge of the vomer and the crest of the sphenoid. The septum of the sinus is removed and the floor of the sella turcica attacked with a small chisel and an opening made to the extent of 1 cm. Hirsch advocates opening the superior osseous part of the nose like a double door by a "Y"-shaped incision, of which the vertical part follows the dorsal line and the two oblique branches divide the nose below the nasal bones. A submucous resection of the whole nasal skeleton is then performed and the sphenoidal sinus and sella turcica opened with a gouge between the two blades of a strong speculum, which separates the two layers of the mucous membrane and crushes the lateral masses of the ethmoid. The author thinks that the submucous resection of Hirsch is long, tedious, and unnecessary, and thereby sacrifices the entire septum, except the columnar cartilage. This method leaves the turbinates and ethmoids intact as far as possible. Radiography should always be availed of to determine if the anatomic dispositions will permit access to

the hypophysis by the route proposed. Jules Broeckaert (Journal of Laryngology, Rhinology, and Otology, July, 1913).

* * *

Treatment of Disease of the Thyroid.—The treatment of disturbances resulting from excessive or perverted thyroid functioning forms a debatable ground, the opinions of internists, surgeons, and röntgenologists differing widely. The reason for these conflicting views is that the primary cause and the differential clinical course of the various forms of hypertrophied intoxication are regarded with too little discrimination, no attempt being made to differentiate them beyond distinguishing between pronounced exophthalmic goiter and its rudimentary forms. The distinction between the nervous and the genuine thyrotoxicosis is very important. In particular the thyroid neuroses, Stern's "basedowoid," must be strictly distinguished from the other groups. Operative treatment in these cases is illogical from the theoretical standpoint and disastrous from the practical. Chvostek declares that in these cases, as well as in mild cases of true exophthalmic goiter in which there is a nervous predisposition, operative measures are not only useless, but may be directly harmful, as severe nervous after-effects are not unusual. On the other hand, in the genuine form of exophthalmic goiter, operative treatment is the most rational and radical of all measures, as also in iodine Basedow rebellious to prolonged internal treatment. Next in importance is repose for the patients, who should be gotten out of their ordinary environment. A trip to an altitude of about 3600 feet is often very favorable, starting first at 1500 feet. The patient should be well nourished, preferably with a carbohydrate-fat mixed diet. Galvanic stimulation of the neck is often useful; the anode being on the sternum and the cathode behind the angle of the jaw, a current of 1 or 2 milliampères should be slowly turned on for from one to three minutes and then slowly turned off. Or, the current may be sent through the thyroid. Mild hydrotherapeutic procedures may be useful adjuvants. Drugs are not needed, although phosphorus, arsenic, quinine, and bromides have been recommended. The adhesions that develop after radiotherapy interfere with operative treatment later. Bauer (Medizinische Klinik, May 25, 1913).

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Pituitary Extract in the Treatment of Hemoptysis.—The author tried intravenous injections of pituitrin in 12 cases of abundant—though not "fulminating"—hemoptysis, with excellent results. The dose used was 0.5 c.c., and the injections were made into a vein at the elbow. Whereas ice and morphine had proved ineffectual, the injection of the pituitary preparation was followed almost immediately by cessation of the hemorrhage in 10 out of the 12 cases. The patients continued to expectorate blackish material for a few hours, but the flow of fresh blood was clearly arrested by the remedy. Where the hemorrhage recurred on succeeding days, the same prompt relief was obtained. In the eleventh case the first injection alone proved effectual, while in the twelfth the

first injection, though soon successful in its results, at first caused sudden pallor, vertigo, and a rise of blood-pressure from 80 to 95 mm. Hg, with primary increase in the amount of hemorrhage for two or three minutes. The author thinks such phenomena can be avoided in the future by diluting the remedy with a few cubic centimeters of saline solution and injecting very slowly.

In discussing the author's communication, another observer pointed out that in 1909, with Boyé, he had shown that extracts of the *posterior* pituitary lowered the coagulation time of the blood where this was increased. Livon soon after found the coagulant properties of the extracts were so intense that no blood-pressure tracings could be taken from the dogs experimented on, the blood at once clotting in the cannulæ. He believed the results obtained to have been due rather to this coagulant action than to diminished blood-pressure in the pulmonary circulation. (P. E. Weil). E. Rist (Bulletins et Mémoires de la Société médicale des Hôpitaux de Paris, April 24, 1913; New York Medical Journal, September 6, 1913).

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Phosphorus, Nitrogen, and Lipoids in Thyroidectomized Animals.—In thyroidectomized dogs the content of total phosphorus and organic phosphorus in the brain, heart, spleen, and liver is diminished, but the content of inorganic phosphorus increased. In the kidneys all forms of phosphorus are usually increased. In the serum and blood-cells the total and organic phosphorus is increased. The nitrogen-content of the brain, liver, muscles, heart, and spleen is increased, that of the kidneys and serum diminished. In animals with hyperthyroidism the total and organic phosphorus is decreased in the brain, muscles, and heart, increased in the liver, kidneys, spleen, and serum. In thyroidectomized animals the total lipoid content as well as the individual lipoid fractions are decreased in the brain, liver, and muscles, while in the blood-serum they are increased. In dogs with hyperthyroidism the total lipoids and their fractions are reduced in the serum and in most of the organs with the exception of the muscles. The content of purin bases in thyroidectomized animals is increased. In the urine of animals with hyperthyroidism the ratio of phosphorus to nitrogen is at first lowered, then increased; the content of urea and amino-acids is diminished, and that of ammonia increased. In thyroidectomized animals the phosphorus-nitrogen ratio is similarly affected, but the content of amino-acids and purin bases is increased. A. S. Juschtschenko (Biochemische Zeitschrift, p. 64, 1913; Zentralblatt für experimentellen Medizin, June 15, 1913).

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Controlling Hemorrhage in Thyroidectomy.—The following procedure is described by the author: The usual transverse collar incision divides the skin and platysma. The upper flap is freed to the upper border of the thyroid cartilage. At a point opposite the middle of this cartilage the fascia over the vertical muscles is slit in a longitudinal

direction a finger's breadth inside the border of the sternomastoid muscle. The slit is extended upward and downward about 2 inches. The fascia of the sternohyoid and sternomastoid is drawn outward and the sternohyoid and sternothyroid muscles inward with narrow-bladed retractors. The finger is pushed down through this space until the carotid is felt, and then, by blunt dissection, the fascia just to the median side is penetrated. The finger is then in the loose areolar tissue in front of the longus colli. Next, retractors with longer blades are substituted, and the sternomastoid and carotid sheath drawn well outward, while the vertical muscles and thyroid gland are displaced inward Now the carotid tubercle should be located. About a finger's breadth below this the artery is sought with two pairs of blunt dissecting forceps When a short arc is freed, a ligature is passed around with an aneurism needle. This is tied, and the parts allowed to fall back into their places. The operation can then be proceeded with in the usual manner. E. O. Jones (Surgery, Gynecology and Obstetrics; Dominion Medical Monthly, February, 1914).

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Detoxicating Property of the Parathyroids in Nephritis.—The author had already presented evidence to the effect that the function of the parathyroids was to "detoxicate the internal secretion of the chromaffin system." In nephritis indications of excessive activity of this system—epinephrinemia, hypertrophy of the adrenals—are to be noted. The present paper reports the results of experiments executed to find out whether, by increasing the parathyroid function, at least some of the symptoms of nephritis might not be overcome. The experimental animals were rabbits in which nephritis had been induced by administration of uranium nitrate. Excessive functioning of the parathyroids was produced by removal of the thyroids, which exert an inhibitory influence over the parathyroids. It was found in 9 experiments that thyroidectomy actually did prolong life in the nephritic animals. That this effect is a direct result of the thyroid removal was negatived, however, by experiments in which simultaneous removal of both thyroids and parathyroids was found to produce no effect. That the excessive functioning of the parathyroids is not direct in its action in prolonging life, but is operative through the kidneys, may be concluded from the fact that after nephrectomy thyroidectomy is without effect on the duration of life. M Georgopulos (Zeitschrift für klinische Medizin; Zentralblatt für experimentellen Medizin, July 10, 1913).

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Relation of the Thyroid to the Parathyroids.—In one series of dogs the parathyroids were removed, whereupon severe convulsions nearly always appeared in a short time. When these had passed off, and the animals were left in an enfeebled, dyspneic condition, with dribbling of saliva and paralysis of the posterior limbs, thyroidectomy was performed in addition, whereupon the severe symptoms remained in abeyance for a

time, only to recur the more violently about three days later, and cause the death of the animals.

In a second series of dogs the entire thyroparathyroid apparatus was removed at one sitting. Already in twelve to twenty-four hours violent convulsions, polypnea, hyperthermia, and ultimately paralysis set in. The animals lived, however, from six to twenty-three days after the operation.

In a third series the thyroid alone was removed. The dogs showed no symptoms of any kind. Two of these animals, in which the parathyroids were then also removed, succumbed in convulsions within seventy hours. The other dogs remained well.

Conclusions: 1. The effects of thyroparathyroid extirpation become manifest very rapidly, often within two days. 2. Thyroidectomy performed after parathyroidectomy is rather frequently capable of alleviating the severe convulsions, but never preserves the animals from recurrence of the convulsions and death. A. le Play (Comptes-rendus de la Société de Biologie, Paris, 1912; Zentralblatt für experimentellen Medizin, June 15, 1913).

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Exophthalmic Goiter and Pleurisy.—A woman had had attacks of Basedow's disease at 38 and at 51 years, the latter attack being at the climacteric period. Two years later, while suffering from a surgical affection of the hand, the patient had another violent attack, lasting one month. Soon after, pleurisy—tuberculous, according to the clinical course and cytologic study—appeared, and with it the thyroid phenomena. The latter thereafter followed precisely the fluctuations in the pleurisy, the fluid returning three times and each time an exacerbation of the Basedow syndrome taking place. When the pleurisy finally disappeared, however, the syndrome mentioned did not, even growing slightly worse. The correspondence of the thyroid manifestations with the pleural phenomena in this case appears to the authors to have been due to irritation of the pleural fibers of the sympathetic. The case tends to show that the sympathetic plays an important rôle in exophthalmic goiter. Either certain Basedow symptoms—exophthalmos, tremor, tachycardia—depend directly upon the sympathetic, in which event the reason for the exacerbations of these symptoms in the present case is clear, or the sympathetic causes them indirectly, transmitting abnormal excitations to the thyroid or producing changes in its circulation. In the latter event the exacerbations in the exophthalmic goiter symptoms must have been due to congestion or secretory disturbances provoked in the thyroid. Hanns and Caussade (Société de Médecine de Nancy, April 23, 1913; Presse médicale, July 30, 1913).

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Hyperthyroidism with Auricular Fibrillation.—Report of the case of a woman who in childhood had had several attacks of rheumatism, and later had "stomach trouble" and asthmatic attacks. For one year she

had been nervous and losing weight, and for several years had at times had swollen feet and palpitation of the heart. There was diarrhea, tremor, and thyroid enlargement. On admission to a hospital the heart rate was from 120 to 160, many beats being too feeble to be appreciated by the examining finger; later the pulse rate and heart beat coincided fairly well, the rate being 80 to 90. No bruit could be detected. A noticeable feature was extreme arrhythmia, there being not merely the difference in rate at different times and with varying circumstances, as is characteristic of hyperthyroidism, but marked irregularity in strength of the beats, and also intermissions. Polygraphic tracings made by Greiwe demonstrated the presence of auricular fibrillation. As is known, the tachycardia of hyperthyroidism is very little influenced by digitalis, but in this case there was a fairly prompt response to digitalis, the heart rate being reduced to 80 or 90, with stronger systoles, as shown in a later polygram—although arrhythmia continued. E. W. Mitchell (Lancet-Clinic, February 7, 1914).

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Thymectomy and Thyroidectomy in Exophthalmic Goiter.—Report of the case of a young girl aged 22 in which Sauerbruch removed the thymus—weighing 49 Gm.—in 1911 because of severe myasthenia and exophthalmic goiter, after the right superior thyroid artery and vein had been ligated without result. The muscular weakness was greatly improved by the thymectomy, but the Basedow symptoms so increased at the close of the summer of 1912 that the tachycardia, the greatly enlarged and pulsating goiter, often producing considerable dyspnea, and the impossibility of closing the eyes caused the patient to be referred to the author for thyroidectomy. In October, 1912, the entire right lobe, the isthmus, and the left lobe with the exception of a small portion above were removed under local anesthesia. The intervention was well borne. The dyspnea and tachycardia disappeared, the pulse rate, when the patient was at home, remaining below 80 for weeks at a time, but when mental excitement was produced, for any reason, the rate increased up to 100. The exophthalmos persisted, though no longer sufficiently marked to impede closure of the eyes. A. Müller (Correspondenz-Blatt für Schweizer Aerzte, January 10, 1914).

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Lymphatic Cell Aggregations in the Thyroid.—Deposits of lymphatic tissue appear in the thyroid under various circumstances. Either local irritation or general disturbances may be present. The former may be chronic, mechanical, or inflammatory in nature. As a chemical irritant may be operative the qualitatively as well as quantitatively altered secretion of the Basedow thyroid, and perhaps likewise iodine medication (Hedinger). In other goitrous formations and in tumors of the thyroid a mechanical source of irritation may be presumed to exist, in chronic thyroiditis an inflammatory condition. The author found lymphatic cell aggregations in 75 per cent. of all Basedow thyroids, but only in 15

per cent. of other goiters. Such deposits are not infrequently to be seen macroscopically in apparently normal thyroids. They occur with considerably greater frequency in the female than in the male sex and are exceedingly seldom before puberty; the frequency of their presence increases with the age of the individual. Anemic and especially obese persons are particularly prone to show them. M. Simmonds (Virchow's Archiv, 1912; Zentralblatt für experimentellen Medizin, July 10, 1913).

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Antagonistic Properties of Guanin and Epinephrin.—The authors found that guanin in a measure diminishes the toxicity of epinephrin. It very markedly reduces, moreover, epinephrin glycosuria. As the pancreas is rich in proteins from which guanin is derived and even contains some free guanin, there is ground for believing that the latter substance plays a part in the regulation by the pancreas of the amount of glucose in the blood. Desgrez and Dorléans (Académie des Sciences, Paris, November 17, 1913; Semaine médicale, November 26, 1913).

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Thyroid Gland in Obesity.—Thyroid gland in therapeutic doses (0.2 Gm. of the dry powder, for example) has little effect on obesity. It increases the appetite and may thus fatten thin persons. Hypophysis treatment sometimes gives results, but it is on diet and physical exercise that one must rely. Léopold-Lévi (Congress of French-speaking Pediatricians, Paris, October 3 and 4, 1913; Journal of the American Medical Association, November 8, 1913).

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Concerning the Association of Acromegaly with Myxedema.—Report of a case of acromegaly complicated by the typical manifestations of myxedema. Thyroid treatment brought about some improvement, the skin becoming thinner and the patient losing weight. The author considers both pituitary and thyroid insufficiency to have been present in this case. L. Millioni (Riforma medica, vol. xxix, Nos. 38, 40, and 41, 1913).

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Hepatic Lipoids in the Treatment of Erysipelas.—The author reports 2 cases of facial erysipelas treated by local applications of hepatic lipoids, rapid recovery following. Attention is called to a new therapeutic measure which may yield gratifying results by reason of the antitoxic and antimicrobic rôle of the lipoids. Tilmant (Société de Médecine de Paris, October 10, 1913; Presse médicale, October 18, 1913).

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Colorimetric Determination of Epinephrin.—New method proposed consisting in the use of manganese dioxide as the reagent for developing a color with aqueous epinephrin solutions or suprarenal gland extracts. The color so developed is estimated by comparison with artificial color standards made by mixing cobalt chloride, gold chloride, and water. A. Seidell (Journal of Biological Chemistry, August, 1913).

Department on General Medicine

Cyclopedia of Current General Literature

Amebic Dysentery, Quinine in the Treatment of.—The author suggests the use of quinine as an adjuvant to ipecac in the resistant cases of amebic dysentery, in view of the successful results obtained by him in treating cases that failed to react favorably to emetine. While working on the hypothesis that the amebæ probably become immune to ipecac upon prolonged administration, he used quinine as an alternating remedy with varying results. While no attempt is made to consider quinine equally as effective as emetine (its amebicidal action *in vitro* is one-fifth as great), there need be no hesitation in considering it an alternate remedy when the latter becomes ineffective. Although quinine is less effective than emetine, the dosage by far compensates for this difference of action; it is also more easily available, and the patient is less susceptible to the discomforts that follow ipecac or emetine administration. Roger Brooke (Journal of the American Medical Association, March 21, 1914).

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Anaphylaxis, Mechanism of.—The author found experimentally that the period of anaphylactic hypersensitiveness is accompanied by a profound change in the composition of an ether extract of the blood and brain tissue. There is noted a marked increase in the content of soaps, fats, and lipoids. L. C. Soula (Académie des Sciences, Paris, November 8, 1913; Presse médicale, November 12, 1913).

Autoserotherapy in Serofibrinous Pleurisy.—Autoserotherapy is a reliable and safe method of treatment for all forms of serofibrinous pleurisy and should be employed in every case where pyemic infection is absent. A positive cure may be expected in over 80 per cent. of cases.

In secondary pleurisies autoserotherapy may not exert any beneficial effect on the primary cause of disease. It will cause rapid absorption of the pleuritic fluid, however, and in incipient tuberculous conditions has been known to arrest the progress of the disease.

In large effusions causing severe dyspnea and pain it is advisable to aspirate from 10 to 200 c.c. of fluid and, before withdrawing the needle entirely, reinject 2 to 3 c.c. under the skin of the patient. The result will be immediate relief from subjective symptoms and more rapid absorption of the exudate. The autoserum injections should be repeated every other day until decided improvement follows. It is advisable to employ only small doses of from 2 to 3 c.c., as most authors have had the best results with these amounts, and larger doses may not be without danger. Charles A. Pfender (Washington Medical Annals, March, 1914).

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Brachial Plexus Anesthesia.—Supraclavicular anesthetization, a method introduced by Kulenkampff, is described by the author. He reports a case showing a possible accident from this method, the only one so far re-

ported, and which he attributes to intoxication by the novocaine employed or to trauma of the brachial plexus.

There were no serious after-effects and the patient was approximately normal in twenty-four hours. The area for injection is the space bounded internally by the subclavian artery, externally and below by the clavicle, and in the depths by the upper surface of the first rib. Several guides for the introduction of the needle have been described, but there is no doubt that the subclavian artery should be the one employed, as there may be several variations in its course. The position of the artery having been absolutely determined, the needle is immediately introduced external to the vessel at a point directly above the clavicle. It is introduced slowly, and is directed downward, forward and inward. The best guide for the path of the needle is the spinous process of the second dorsal vertebra. The latter should be marked on the skin and the needle be pointed directly toward it. There is one clear indication that the needle is at the plexus, viz., the appearance of paresthesias in the hand and arm, in the medial or radial distribution, or in both; and nothing should be injected until they appear. If they appear in the medial distribution alone, the needle should be introduced a few millimeters deeper for the second half of the fluid, as the median is rather superficial at this point. The solution usually employed is 2 per cent. novocaine, combined with epinephrin. The anesthesia of the arm is usually complete enough for any operation, though it may be incomplete in about 15 per cent., or less, according to the experience of the operator. It has been used in about 250 cases successfully, but this is hardly sufficient experience to permit sweeping conclusions. Temporary paralysis of the diaphragm has been reported several times, and the author believes the method contraindicated for patients suffering from pronounced intrathoracic disease. The only other reported complication is a single instance of musculospiral paralysis. This procedure will prove a valuable addition to the methods of regional anesthesia when serious complications can be insured against. H. Neuhof (Journal of the American Medical Association, May 23, 1914).

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Calcium in Therapeutics.—Calcium not only enhances the coagulating power of the blood, but also renders morbidly permeable vessel walls less permeable. The latter effect is strikingly evident in hemorrhagic affections, such as scorbutus. This hemostatic effect can be anticipated only in case of bleeding by diapedesis. The absorption of calcium salts, moreover, depends on a variety of factors, especially on good gastric secretion and on the absence of fermentation acids in the intestine.

The author detected the abnormal permeability of the vessels responsible for the rebellious hemorrhages of scurvy in one case by applying a cupping glass for five minutes. The vacuum glass drew blood as before after two weeks of treatment by the ordinary measures. The author then gave the patient 3 Gm. a day of calcium lactate for five days, after which the cupping glass no longer drew blood, and complete recovery fol-

lowed after three weeks of the same treatment.

The author also found calcium lactate useful in 2 cases of iodine poisoning from a course of potassium iodide. A further useful application is in curing the cutaneous manifestations of anaphylaxis. In pleurisy with effusion the fact that the calcium renders the vessel walls less pervious has an unfavorable side, as this checks absorption. Its use is indicated, therefore, only when the effusion constantly recurs after puncture. When the walls of the pleura are severely modified by chronic inflammation, calcium has no effect. Animals develop cachexia when given calcium salts over a long period. In 15 cases of hemorrhagic nephritis the results of calcium medication were inconstant, and in some the condition was aggravated. Von den Velden (Therapeutische Monatshefte, Oct., 1913).

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Fractures of the Upper Extremity, Treatment of.—The majority of fractures of the clavicle occur in children and are of the incomplete or greenstick kind. Sometimes, especially in adults, there is overriding of the fragments, which is usually easily overcome by pressing the shoulder backward and outward. This can be done easily by having the patient lie flat on the back on a hard table and then making pressure on both shoulders. When the fragments come into position, the author applies 3 or 4 straps of adhesive plaster over the seat of fracture, one end extending 6 inches or so down the back and the other end similarly down the front of the chest. This simple dressing, with a sling to support the hand and forearm, is ample for most fractures of the clavicle and gives as good or better results than the more cumbersome ones. If it does not seem to hold sufficiently well, it can be supplemented with a posterior figure of eight bandage, or a Sayre dressing, or a Velpeau, or anything which seems to meet the special need. The dressing, whatever it is, is removed on the second or third day, the skin of the parts involved washed with alcohol, the arm and shoulder region lightly rubbed with the hand for a few minutes, and the shoulder and elbow joints gently moved. The dressing is then reapplied. This treatment is repeated two or three times a week. At any one of these changes, if the dressing does not seem to be holding the fragments well enough, it can be supplemented, or if supplementary dressings have already been used and seem unnecessary, they can be dispensed with. At the end of three or four weeks the vast majority of fractured clavicles will be well and the function of the limb practically perfect. The patient is discharged with caution against too great use of the arm for a few weeks more.

In fractures about the elbow the author has given up almost entirely the attempt to use acute flexion during the first few days, having too often seen the patient return for the second dressing with great pain about the elbow, much swelling, and sometimes some superficial gangrene from pressure. He starts these cases on an internal right angular splint, and at the second or third dressing, while the fragments are still plastic and when the swelling has subsided, slings the wrist from the neck, obtaining as acute flexion as possible

without too much pain, increasing the flexion at subsequent dressings for about two or three weeks, and then decreasing it again until all dressings are abandoned at the end of four or five weeks. When these cases are complicated with fracture or dislocation of the head of the radius, supination of the forearm seems better than the midposition, and the anterior angular splint is used until it seems wise to adopt acute flexion.

In fractures of the shaft of one or both bones of the forearm the author also prefers to start with the internal right angular splint. This splint is useful as an initial dressing for almost any fracture between the shoulder and the wrist, for it gives the greatest possible comfort to the patient during the first few painful days and maintains fixation as well as any other dressing. In fractures of the forearm it is found often that the ulnar fragments tend to drop to the ulnar side, and a change to the supine position, or the addition of a small splint applied to the ulnar surface, after correction has been made, is useful.

In attempts at reduction of Colles's fracture, soon after the accident, when no anesthetic is used, the author has found the most satisfactory method to be a sudden, sharp jerk of the wrist administered by clasping the fingers of one's own hands under the upper fragment and making pressure with the thumbs on the dorsum of the lower fragment; by abruptly pronating the hands, a surprising amount of force can be applied. This takes the patient's muscles off their guard and will be successful when a slower method of pulling may set the patient's muscles into spastic contraction and render reduction almost impossible and very painful. F. O. Allen (Journal of the Medical Society of New Jersey, January, 1914).

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Movable Kidney, Operation for the Fixation of.—After nephrorrhaphy many patients have complained of considerable discomfort, or even of actual pain, in the loin. The usual incision for this operation is an oblique one, close to, and parallel with, the last rib. After partial decapsulation, the organ is stitched by some method or other to the margins of the wound. Thus, the greater part, if not the whole, of the kidney becomes fixed in the space between the last rib and the crest of the ilium instead of lying, as normally, well under cover of the ribs. As a result of this abnormal position the ureter tends to become kinked, and thus obstruction to the flow of urine may occur; and further, the kidney is exposed to the pressure of the patient's clothes, or in certain movements it may be caught between the lower ribs and the crest of the ilium.

The author has practised for some years a modification of this operation which removes these objections, and which at the same time gives thorough fixation. The renal capsule is split from end to end along the convex border, and then stripped for about half its extent from the anterior and posterior surfaces of the kidney. The upper three-fourths of these two flaps of capsule are now folded back over the part of the capsule which has been left adherent, and are retained in that position by a few stitches passing from the free edge of

the flaps to the adherent capsule near the hilus, care being taken not to injure the pelvis. These stitches prevent the flaps from slipping back over the denuded renal surface. Three fixation stitches of strong catgut are next passed through the ends of the flaps, which are still free, at the lower end of the kidney. By this means, the part of the capsule in the grip of the stitch is twisted and puckered, and the tendency for the stitch to cut out is diminished. These stitches are not tied in the mean time. The kidney is now pushed back into its normal position, care being taken to place the upper pole behind the liver. One end of each of the three fixation stitches is now passed through the muscles and fascia forming the upper margin of the wound, near its posterior angle, and tied as they are passed. The kidney thus lies well under cover of the ribs, with its lower pole on a level with the upper margin of the wound. The cavity under the kidney is packed with gauze and a dressing applied. This packing is left undisturbed for six or seven days, but subsequently it is renewed every two or three days till the wound has closed. The gauze gives temporary support to the kidney and relieves the strain on the fixation stitches. By this method the kidney is fixed in its position by a broad band of fibrous tissue which has formed between its denuded surface and the posterior abdominal wall. Peter Paterson (Lancet, January 3, 1914).

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Nasal Accessory Sinuses in Children, Affections of.—Inflammatory affections of the nasal sinuses occur more frequently in children than is generally considered. Chronic sinusitis is not as frequent as in the adult, but both acute and subacute sinusitis are common, and many instances of postnasal catarrh are but symptoms of some inflammatory condition of the adjacent sinuses. Inflammation of the maxillary sinus at an early age is not infrequent.

Most important in the child are the inflammatory affections of the ethmoid cells, these cells and the antra being more frequently involved than the frontal and sphenoidal sinuses.

It is rather unusual to have a single sinus involved to the exclusion of the others.

The frequency of the infectious diseases in childhood and the concomitant inflammatory changes of the nasal mucosa explains why the sinuses should be involved during this period, and especially does this occur in influenza, scarlet fever, measles, pneumonia, and diphtheria.

In the newborn antral sinusitis may occur as a result of infection by vaginal discharges from the mother or from injury the result of instrumental delivery.

The recognition of the various sinus affections in the child is more difficult than in the adult, as the subjective symptoms are not clearly defined. Great weight should be attached to the intranasal findings. Transillumination is of great value, providing it is used in connection with a regulating rheostat to measure the intersity of the illumination. The author has found of considerable use, when its introduction was possible, the electrically illuminated pharyngoscope; with it one can explore readily the nasal areas and the recognition of posterior ethmoid and

sphenoid disease is much facilitated. Carefully made Röntgen plates are of great service, especially as regards the presence of pus in the antra or frontal sinuses, and previous to the tenth year the use of the stereoscopic radiograph is the most valuable single diagnostic medium available. A markedly swollen mucous membrane, however, will give a shadow more clearly than the presence of pus in a sinus.

The presence of frequent headache should always occasion suspicion of sinus inflammation, as should also tenderness to touch over the suspected sinus (frontal especially). In acute sinusitis, pain of an aching character or acute, neuralgic in type, even like that of the adult, is almost invariably present at some time. The degree of pain in the head, however, very often bears no relation to the severity of the inflammatory process of the particular sinus involved. A dull pain between the eyes in the presence of other intranasal symptoms strongly indicates ethmoid involvement. A symptom of great diagnostic value, when present, is the cessation of pain with the appearance of free nasal discharge, and the return of the pain when the discharge lessens or temporarily ceases. Curiously in purulent sinusitis in children the nasal chamber may be entirely free from pus during irregular periods of the day; care must be taken in considering this, as serious errors might otherwise result. If there is lymphoid tissue in the vault of the pharynx, most marked on the side from which this discharge comes, often the adenoids alone are not the source of the continued coryza from which the child suffers, but in addition there is a sinusitis.

In the so-called strumous child, where there is a purulent nasal discharge, with excoriated upper lip, marginal blepharitis, and frequently corneal ulcers, purulent sinusitis, usually of the antrum and ethmoid cells, exists, and, while serious organic osseous changes are not usually present, yet when they do occur the ethmoid structures are the ones most frequently involved. Polypoidal degeneration, when it occurs, is strongly indicative of a latent specific basis.

The treatment of sinusitis in the child should always aim to destroy as little tissue as is consistent with obtaining permanent results. Palliative treatment will cure the majority of acute sinus inflammations, *e.g.*, the use of warm alkaline sprays, or normal salt solution, and a weak epinephrin solution to reduce the congested mucosa, with, if the case is severe, rest in bed, the employment of laxatives and such general measures as may be indicated. The local employment of cocaine in the acute cases is usually unnecessary and is to be deprecated. Much relief may, however, be obtained by the external local application of heat or cold, or the use of the steam atomizer.

Where the sinus disease has continued and resists treatment, it is well to obtain a culture of the microorganisms present in the sinus and have prepared an autogenous vaccine. Intranasal treatment is indicated in all cases of sinusitis in children, but the turbinal tissue should as far as possible be preserved, and while it is necessary at times to remove the anterior end of the middle turbinate, removal of its entire structure to

reach the stomata of any of the sinuses is not warranted.

When possible, drainage should be obtained through the natural openings, and to accomplish this it is proper to remove enough tissue at such points as may be required.

When the frontal sinus is involved, attention must be paid to the anterior group of ethmoid cells before the inflammation of the frontal sinus will subside. Antral disease as a rule readily subsides under ordinary treatment, but in obstinate cases, after fracturing and pushing aside the inferior turbinate body, a large opening should be made through the inferior meatus into the sinus and the parts thus drained, the use of irrigation or not depending upon the character and chronicity of the purulent discharge. Aspiration and subsequent lavage are indicated in older children instead of more radical measures, when the antrum continues to discharge pus and does not respond to the usual treatment.

Enlargement of the middle turbinate body is a serious obstacle to the cure of inflammatory changes in any sinus, and until this has been relieved the sinusitis may prove most obstinate to treatment. Attempted removal of purulent material in the child by suction or negative pressure has not in the author's hands been of much value, and he is not certain but that it did not exercise a harmful effect.

Free drainage must be secured before cure can be obtained, and if intranasal treatment fails to procure this whatever radical operation may be selected should be performed. Before performing a radical external operation for frontal empyema on the child, however, it is well to remove the entire group of ethmoid cells. The antrum rarely requires external operation in children. Seymour Oppenheimer (Medical Record, February 21, 1914).

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Paratyphoid Fever, Fatal.—The author's case was of the type A, which, according to the literature, seems less fatal than the B type. The interesting and atypical features of the case are described as (1) its fatal results; (2) the lesions found in the intestine, viz., non-specific ulcers; (3) the lack of involvement of Peyer's patches; (4) the enlargement and great increase of endothelial cells in the mesenteric lymph-nodes, which have shown but little change in other cases, and the normal spleen. The following conclusions were reached: While paratyphoid is considered rare and not usually fatal, both of these ideas might be changed with closer scrutiny and study of cases of "clinical typhoid" with negative Widal tests and blood-cultures. The spleen is not necessarily enlarged or involved in paratyphoid of the A type. In health laboratories or in other places in which these examinations are made a serum should be tested for paratyphoid agglutinins, both A and B, after the serum has been pronounced negative three times so far as the true typhoid Widal is concerned. More accurate blood-studies and cultures should be made in all cases which resemble typhoid. An antiparatyphoid vaccine should be tried in the treatment of the disease, and as a measure of prevention such vaccines should be used either alone or in combination with typhoid vaccine. L. D. Bristol (Journal of the

American Medical Association, April 4, 1914).

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Periarticular Suppuration of Gonococcic Origin.—A periarticular suppuration of pure gonococcic origin may exist which may simulate an ordinary pyogenic tenosynovitis or cellulitis. It apparently follows an arthritis of the neighboring joint, which in itself may be non-suppurative. The articular and periarticular lesion may be absolutely distinct anatomically.

The history of a gonorrheal infection, the existence of a urethritis, the previous articular lesions, the absence of an external point of entry for the infection, and the presence of gonococci in the urethral or vaginal secretions may suggest the diagnosis. The certain diagnosis is made by the finding of gonococci, preferably demonstrated by culture, in the purulent exudate.

The condition is subacute and offers a good prognosis if the pus focus is promptly incised and the systemic infection combated by proper vaccine therapy.

Baur's contentions that in gonorrheal rheumatism the gonococcus does not live after the sixth day of the disease, and that the gonococcus cannot exist in the soft tissues around the joints, are unwarranted. DeWitt Stetten (Archives of Diagnosis, January, 1914).

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Pericarditis, Adhesive, Diagnosis of.—Retraction of the chest wall is not pathognomonic of adhesive pericarditis, as pleuritic adhesions may cause this funnel-shape of the chest during inspiration. But when the retraction is circumscribed along the left costal arch, between the parasternal and anterior axillary lines, and it pulsates, the author regards it as pathognomonic of the condition referred to. The pulsation is synchronous with the carotid pulse. The best way to examine for retraction of the wall is to lay one hand on the lower part of the sternum and the other on the spine opposite; then, as the patient takes a deep breath, one can feel that the chest grows narrower between the hands and perceive the characteristic systolic retraction much more distinctly than by simple palpation. The preference of the edema for the upper part of the body is also characteristic. Still another sign is the paradoxic engorgement of the veins in the neck during inspiration. The veins may show more plainly during inspiration than at other times. Röntgenoscopy may show that the entire heart moves with the excursions of the diaphragm. Tornai (Berliner klinische Wochenschrift, September 29, 1913).

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Phlebitis, Treatment of.—The entire body should be bathed daily with alcohol and water, supplemented with a soapsuds cleansing twice a week. Following such a bath the skin should be well rubbed, thus increasing the superficial circulation and drawing away blood from the point of disease. The bed-clothing should be light but warm. Flannel nightdresses serve best. If possible the involved part should be exposed to the direct sunlight for at least one hour daily. All cases seem to have a shortened convalescence upon following out this rule.

The alimentary tract should be very closely watched in order that the

bowels may move twice in each twenty-four hours. If they will not do so naturally, a mild cathartic should be given. Three times a week a high enema should be administered. The diet in suppurative cases should be liquid. The broths and soups should be strained, the fruit juices should not contain any pulp, and the milk should be diluted with water and the proper amount of lime water added. Water should be given very freely.

When suppuration is present, as a complication of the venous condition within a serous cavity, far better results are obtained if the patient be Ochsnerized, everything except water being withheld for intervals varying from three days to a week.

As for local treatment, in *acute* cases the limb should be elevated upon a well-padded inclined plane at an angle of 45 degrees, and wrapped in sheet wadding or absorbent cotton held in place by very light gauze bandaging. Under no circumstances should the part be massaged. It is well to bathe the skin with an alcoholic solution, using a soft sponge and avoiding rubbing. Dry the skin by fanning and then dust with talcum powder. Occasionally the powder can be omitted and olive oil used gently to bathe the skin surface. The whole dressing should be continuously heated by hot-water bottles so adjusted as to bear no weight upon the part. The temperature of the dressing should be evenly maintained at 110° to 115°, day and night. Once each twenty-four hours the dressing should be carefully removed and the membrane inspected.

Where ulceration of the skin has occurred over the site of the involved vein, hot bichloride of mercury fomentations should be applied, and these changed frequently and kept moist and hot. A week of this treatment will so antisepticize the area that the fomentations can be omitted, the area allowed to desiccate, and a dry dusting powder applied. The warm covering in these cases should be windowed over the area to be treated so that ready access to the ulcerated part is obtainable while the dry dressing as a whole is not disturbed. The dusting powders giving the best results are oxide of zinc, stearate of zinc (carefully pulverized and not allowed to cake), and subgallate of bismuth.

In *chronic* cases, if, when the patient lies down and the limb is elevated, careful digital milking will empty the tortuous channel, the case is amenable to a trial without operative procedure, for the time being at least. The patient is instructed to elevate the disrobed member at an angle of 45 degrees for from ten to thirty minutes daily. A properly outlined or close-fitting elastic or linen fiber stocking is to be worn continuously, except when the limb is elevated. The skin should be gently bathed thrice daily with an alcoholic solution, using a soft sponge, after which it should be dried by fanning and talcum powder dusted over. The patient should improvise an inclined plane cradle, properly padded, in which the affected member may rest during the night. Often elevating the foot of the bed eighteen inches will serve the purpose well. To avoid discomfort of the upper body the upper half of the mattress can be propped up with padding, or an extra pillow or two provided.

Chronic phlebitis is materially benefited by local alternate hot and cold sprays, douching, packs, or submersions. Either of these methods can be used, according to convenience, for they give like results. The submersion and spray combined are often the most convenient and are to be carried out as follows: Two tubs or pails are used, one containing water drawn from the cold-water tap (or, in hot weather, with a piece of ice added), and the other, water at 110°. The affected limb is first submerged in the hot water and held there thirty seconds, then in the cold water for fifteen seconds. This alternating procedure is gone through ten times, ending with the cold-water submersion. The part is then gently rubbed until the skin is dry and red, showing proper reaction. Gentle stroke massage in the direction of venous flow is carried out for ten minutes, the skin dusted with talcum powder, and the member properly clothed after the elastic support has been applied.

Where it is not feasible to use the submersion method, spraying with sponges of hot and cold water, or a nozzle spray attachment, serves the purpose very well, applied for the same length of time. Even when the submersion method is used, the spray may be employed to supplement it by treating the upper parts that cannot be submerged. When none of these methods can be carried out, hot and cold packs for the same periods serve well. By such treatment the vasomotor system is greatly augmented and the musculature of the venous walls stimulated to action.

If the tortuous superficial veins are emptied to a greater or less degree by the treatment, one is fully justified in advising operative methods for complete relief.

When the abdominal-wall veins are involved, posture treatment for ten-minute periods thrice daily aids greatly. This can be done while the alternating thermic treatment is being applied, with the patient lying flat on the back and the hips slightly elevated, supported on a pillow. In these cases the skin should be dried by gently rubbing up on the right side of the abdomen, across the top just below the ribs, down on the left side, and then in a circle with the umbilicus as center.

In nearly all chronic phlebitis cases strychnine, $\frac{1}{30}$ grain, or tincture of nux vomica in 10-minim doses four times a day, is indicated. Basham's mixture, Blaud's mass, and one or two of the bitter tinctures, as gentian, cinchona, or calumba, taken well diluted with water a half-hour before meals, are also indicated. Fowler's solution in 2-minim doses, well diluted three times a day before meals, and increased a minim a day until 10 minims three times a day are given, is useful in the average case. G. S. Foster (American Journal of Surgery, April, 1914).

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Pneumonia, Camphor Treatment of. —The author reports good results in the treatment of 6 cases of pneumonia, 3 of which were postoperative pneumococcic pneumonias. In 1 case he is convinced that without the administration of the camphor the patient would have perished. Her resisting powers greatly weakened by a severe influenzal infection, a lady 71 years of age had been up and about for several weeks when the

initial chill ushered in an attack of acute lobar pneumonia, which quickly consolidated the whole of the left upper lobe. Prostration was rapid and extreme, cardiac and vasomotor shock predominating from the first. The toxemia soon became profound, resulting in delirium and restlessness, insomnia, increased respiration, dyspnea, high temperature, right heart failure, diminished renal secretion, intestinal paresis as evidenced by persistent ballooning of the abdomen, gastric distention, wavering and intermittent pulse, and complete absence of cough and expectoration. This condition resisted all classical treatment, but the first injection, given on the second day of the disease, of 10 c.c. of 20 per cent. camphor oil made a decided impression. These injections were repeated every four hours, night and day, with the result that the patient recovered in the usual gradual manner—without crisis, which seems uniformly to attend the camphor treatment.

Although the injections in this case were given every four hours, the author advocates longer intervals between doses and advises that the following rules be adhered to: A 30 per cent. preparation of camphor in oil of sesame should be used. The physician should always see to it that the solution is of full strength and absolutely sterile. In preparing the remedy, the oil to be sterilized should be put in a bottle with a loosely fitting stopper, the sterilization taking place in a boiling water bath. Whenever the preparation is to be used it should be drawn (not poured) into the sterilized syringe, care being taken to prevent loss of camphor by volatilization. As soon after the initial chill as possible, 10 c.c. or 2½ drams (equal to 36 grains of pure camphor) per 100 pounds of body weight should be injected hypodermically. This should be repeated every twelve hours except in bilateral pneumonia and in severe toxemia. In those cases the injections should be given every six to eight hours. The syringe used should be a Luer, without rubber washers, of 10 to 20 c.c. capacity, or a phylacogen syringe may be used. The site selected for the injection should be the outer thigh or the abdomen. The point at which the injection is to be made should be carefully sterilized by washing and application of tincture of iodine. The injection should be made slowly and the oil gradually deposited below the subcutaneous fatty tissue and not into it. If these simple precautions are carried out there will be no trouble either in the form of abscess, sloughing of the skin, or immediate discomfort following the injections. The author has yet to observe the least difficulty in these directions. W. J. Cruikshank (New York State Journal of Medicine, February, 1914).

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Pulmonary Tuberculosis, Palliative Effect of Artificial Pneumothorax in. —The author reports 3 cases, all different in type, progressive, advanced, and hopeless, which were selected for lung compression to relieve the cough and expectoration and not with a hope of arresting the disease. In the former sense the procedure was successful. The author, therefore, would add to the indications given for lung compression the following: "Hopelessly advanced

cases in which after careful examination it is ascertained that cough and expectoration is being produced from a large cavity in one lung even though the other is badly infiltrated." His cases altogether numbered 14 and were selected from those which, after a fair test, did not respond to other well-tried methods of treatment. All compressions were made by the Forlanini method, with 0.5 per cent. novocaine anesthesia. The author believes that artificial pneumothorax can be successfully employed outside of the hospital or sanatorium if the technique employed is perfect. W. C. Voorsanger (Journal of the American Medical Association, May 9, 1914).

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Rheumatic Affections, Intravenous Injections of Sodium Salicylate in.— The author's experience with the intravenous administration of the drug comprises 12 cases of articular rheumatism of various degrees of severity, in which about 130 injections were used.

The two most important points to be observed in the giving of the injections were found to be: 1, to use only a very fine, sharp needle, so that the trauma to the vein wall may be as slight as possible, and, 2, to have the solution fresh and made with chemically pure crystalline sodium salicylate. The technique employed was as follows: A stock solution is made by dissolving 10 Gm. of C. P. crystalline sodium salicylate in 50 c.c. of distilled water which has been freshly sterilized by boiling. The drug is weighed and handled as aseptically as possible, and the solution after being made is not subjected to further sterilization. The solution should be perfectly colorless and, if protected from the light, will keep for several days.

A rubber ligature is applied to the upper arm sufficiently tightly to prevent the venous return flow, and, if necessary, the venous engorgement is increased by letting the arm hang down and by closing and opening the fist. The skin about the flexor surface of the elbow is sterilized by painting it with tincture of iodine. A 10 c.c. all-glass syringe, carefully sterilized, is filled from the stock solution, each cubic centimeter (16 minims) of which contains 3 grains (0.2 Gm.) of sodium salicylate. A fine, bright, sharp hypodermic needle is used. With the patient's arm fully extended and the vein fixed below by pressure of the left thumb the needle is thrust into the vein in the direction of the venous flow. In order to be certain that the point of the needle is within the lumen of the vein the piston is then slightly withdrawn. If a drop of blood appears at the mouth of the syringe the ligature is loosened and the proper quantity of solution injected. As the needle is withdrawn from the vein gentle pressure is made for a moment at the site of the puncture to prevent leakage of the blood into the subcutaneous tissue, and the iodine is then washed off with alcohol. No dressing is required for the tiny wound in the skin. In case a good-sized vein is available in each arm it is well to use the arms alternately, but the author has found no difficulty in using the same vein for a number of successive injections when necessary.

In most cases the dose was either 15 or 20 grains (1 or 1.25 Gm.) and the injections were given at twelve- or

eight- hour intervals over a period of from three to six days. Occasionally, in robust men, as much as 30 grains (2 Gm.) were given at a time, and as much as 120 grains (8 Gm.) given in the first twenty-four hours, without any unpleasant effects whatever. Indeed, one of the noticeable features of this method was the entire absence of shock, prostration, or other objectionable constitutional effect.

As regards the therapeutic effects, the relief of pain was prompter and more pronounced than is usual when the drug is administered by mouth. It was a common occurrence to see a patient who had been suffering intensely obtain almost complete relief for a number of hours after an injection, and to look forward with impatience to the next. In one extremely severe case, in which 130 grains a day by mouth had been given for three days with no effect whatever, improvement was seen almost immediately after the intravenous injections were begun. In the case of a young girl whose intolerance to the drug by mouth was complete the intravenous injections produced immediate relief and a rapid cure.

While the author is far from feeling that the method should replace mouth administration for routine cases, he is convinced that it has a field of usefulness. It solves most satisfactorily the problem of treatment of those patients who are quite unable to retain the drug when given by mouth. It should be tried in patients who show little or no response to the usual method. When the pain is intense it seems worth while to begin the treatment with a few intravenous injections before resorting to the usual method. Finally, the injections seem to have direct advantages over the ordinary method in cases with threatening heart complications and in the treatment of severe rheumatic affections of the eye, by reason of their more rapid action and accurate dosage. Lewis A. Conner (Medical Record, February 21, 1914).

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Ringworm, New Treatment for.—The following treatment has been found by the author rapidly curative: The part being first washed with a strong solution of sodium bicarbonate, it is next swabbed with a piece of lint moistened with spiritus ætheris (1 part of ether to 2 parts of alcohol) to remove the grease. It is next dried, painted with tincture of iodine (B. P., 2.5 per cent. of iodine) and an ethyl chloride spray immediately applied. It is best to work with a pair of ethyl chloride tubes in each hand, thus covering a larger area in quicker time. The deeper the disease process, the longer the spray must be applied. The spray is continued until the integument gets china white. In from twenty-four to forty-eight hours the patch of ringworm has became quiescent. Next tiny spots should be looked for and treated in a similar manner, when they will also disappear in from a few days to a week. In ringworm of the scalp 3 or 4 applications of iodine and spray are required, but on the face or smooth surfaces 1 application suffices. The author has succeeded in curing ringworm of months' standing in one week by this method, and it has never failed him. C. Hughes Foley (Lancet, January 24, 1914).

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Salvarsan and Neosalvarsan Injections.—The author answers the ques-

tion whether in place of the usual weak salvarsan and neosalvarsan solutions a more concentrated solution, with a correspondingly less amount of fluid, should be used in the following manner: When salvarsan is used, a weak solution is best, since it is decidedly less toxic than the concentrated solution; when neosalvarsan is used, the concentrated solution is to be urgently recommended, since the danger of oxidation is decreased in direct proportion to the less quantity of water used to make the solution. Physiologic salt solution is the best vehicle—10 c.c. for 0.75 Gm. of neosalvarsan. These injections are well borne, and cause practically no reaction. E. Schreiber (Münchener medizinische Wochenschrift, September 9, 1913).

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Stricture of the Esophagus, Diagnosis of.—The following method of diagnosing stricture of the esophagus was used by the author in certain cases in which the Röntgen diagnosis with bismuth was impracticable by the ordinary methods: Sausage skin was cut into lengths of about 50 mm., thoroughly washed, and put into a solution of 1 per cent. liquor formaldehydi and 10 per cent. glycerin. One end of the piece, the distal end, was tied with silk floss to make a bag, and the proximal or mouth end slipped over a rubber ferrule and tied. The bag as it is then is only a string, and the patient swallows it with the aid of a little water.

When the stricture admits a No. 15 French olive, it is best to keep the skin straight by running it over a capillary rubber tube. This is easily done by tying the upper end on the ferrule, holding it under a water tap, and allowing the water to carry the tube through. There should be a small metal end on the tip of the tube so that the skin can be tied without collapsing the rubber. The stomach content can then be aspirated so that one can see if the tube has passed into the cardia.

It is surprising to see how the skin can be swallowed through the smallest stricture. After it is down, a thick bismuth mixture is allowed to flow in, 20 c.c. at a time. After the operator is sure that the bismuth is down, the skin is pulled up a little and allowed to drop back so as to untwist any kinks existing. This operation of filling and pulling is continued until the bag is full to the pharynx; the patient is given a couple of tablespoonfuls of bismuth mixture to swallow outside the tube, a teaspoonful at a time, to fill any irregularities or pockets that the bag does not fill, and the Röntgen ray observation is then made. In removing the bag, if the stricture is small, the patient is placed face downward over the edge of the table and over a receptable and it is gently and firmly pulled out, which naturally takes a little time.

The advantage of the method lies in the readily obtained skin, the fact that the extent of the involvement below as well as above the stricture can be seen, and that a good outline can be obtained at an early as well as at a late stage of the process. A. C. Crump (Journal of the American Medical Association, May 9, 1914).

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Tuberculosis, Treatment of.—From observations of the effects of 56 varieties of treatment in over 1082 cases of tuberculous disease, the author concludes that tuberculosis, whether

acute general, acute pneumonic, bronchopneumonic, or chronic, as well as tuberculosis of any other special parts, is amenable to medical treatment only when there is proper elimination and when the infected area can be reached by the body fluids; otherwise surgical procedures are indicated. Tuberculosis of the skin, glands, bones, and special organs is, as a rule, of such a nature that medical therapy should be considered first and foremost.

Of the various treatments tried, but two showed clinically anything like a specified action upon the tubercle bacillus and tuberculous processes. These were garlic and mercury. Garlic contains a volatile oil, allyl sulphide, which is strongly antiseptic and seems to have a remarkable power of inhibiting the growth of the tubercle bacillus. It is eliminated by the lungs, skin, kidneys, and liver, and is oxidized into sulphuric acid in the system. Applied locally, it is freely absorbed by the skin and penetrates the deeper tissues. Garlic gave the author the best results, and would seem equally efficacious, no matter what part of the body be affected. The dosage used internally was 1 dram of the expressed juice or 2 drops of the essential oil three times a day; externally poultices of crushed bulbs, 1 part, with 3 parts of lard, or a garlic ointment (50 per cent. of the juice in petrolatum), were applied daily.

Mercury biniodide, $\frac{1}{30}$ grain three times a day internally, and unguentum hydrargyri externally, gave the best results next to garlic.

In many cases of severe toxemia with continued septic temperature more active elimination is necessary. In such cases the best results were obtained by one of the following treatments:—

1. Normal saline, 220 c.c., at 106° F.; also of value in hemorrhagic cases, intravenously.

2. Guaiacol, 32 drops in 220 c.c. of sterile water, at 106° F., intravenously.

3. Mixture of sodium salicylate, guaiacol, and glycerin, of each, 32 grains or drops in 220 c.c. of sterile water, at 106° F., intravenously.

4. A 2 per cent. aqueous solution of pure phenol (Bacelli's treatment), 1- to 5- c.c. doses hypodermically or by Murphy's drip in 10-c.c. doses; the kidneys must be watched.

Cases of continued septic temperature, not improving from the above, should be treated surgically (incision and drainage, thoracotomy, thoracoplasty, and pneumotomy).

For making the soil unfavorable for the growth of the tubercle bacillus through an effect on body fluids, phosphorus, $\frac{1}{1000}$ grain t. i. d., and Fowler's solution, 1 drop t. i. d., gave the best results.

Tuberculosis vaccine was found to be contraindicated in septic cases, but rendered valuable service after elimination of the toxemic condition, and in cases not of this type. M. W. McDuffie (Interstate Medical Journal, March, 1914).

* * *

Tuberculous Bone Abscesses and Sinuses, Tuberculin Treatment of.— Better results are obtained than from other measures by the use of tuberculin, both locally and systemically, in the conditions referred to. The author uses tuberculin residue systematically, and the old tuberculin in abscesses and sinuses. One should

remember to treat first of all the primary focus. As nature demands absolute rest at all times, one should endeavor to secure this, and recognize that the treatment of the abscess or sinus is secondary. Good results are had also from using olive oil, strychnine, tincture of nux vomica, potassium iodide, tincture of ferric chloride, and syrup of the iodide of iron.

Where the abscess is very large and deeply placed, there being no pressure symptoms, if the part is put at rest by traction and fixation and the patient allowed plenty of fresh air, sunlight, and good food, the abscess contents will become absorbed and encapsulated. In cases with a great deal of pain, however, the author advocates incision, evacuation of the abscess, and immediate closure.

All abscesses secondarily infected should be opened at once and swabbed out with phenol followed by alcohol. In some convalescent cases of bone tuberculosis, where the focus is circumscribed and easily accessible, for example in the condyles of the femur, erasion may be done, always with the use of an Esmarch bandage and a tourniquet. The cavity should be swabbed out with tincture of iodine and filled with the following mixture: Yellow wax, 1 part; wool-fat, 5 parts; bismuth subnitrate, 15 grains to 1 ounce of the mixture, after which the incision is closed.

In cases that refuse to heal under local treatment, and ultimately result in the formation of an obstinate sinus, he has had some success by the use of Beck's bismuth paste, or, preferably, chalk mixture. A 10 per cent. ointment of scarlet red in petrolatum was also used with success. Before using the tuberculin in sinuses, he tries to get rid of the secondary infection by curetting the walls of the sinus, followed by an irrigation of quinine and urea hydrochloride or potassium permanganate solution. After doing this three times a week for two or three weeks, the tuberculin treatment is begun.

Each 10 minims of the old tuberculin preparation used equals 0.5 mg. of tuberculin in normal salt solution, with 0.25 per cent. of phenol. One minim of this is added to 150 minims of normal salt solution as an initial dose and injected three times a week. The second week the dose is increased to 1 : 100, the third week to 1 : 50, and the fourth week to pure, or full strength. The dose is, of course, governed by the reaction, both local and systemic. There is some systemic as well as local reaction after the first injections, but this usually disappears entirely after the third treatment. To bring the tuberculin into immediate contact with the walls of the sinus, tuberculin solution is injected into the depths of the sinus by means of a syringe or a small soft-rubber catheter, which is withdrawn as the injection is made. The sooner one gets the sinus closed or thoroughly plugged, aside from the treatment of the granulation with the tuberculin or some other substance to stimulate the walls of the abscess or sinus, the better the results. W. S. Niblett (Interstate Medical Journal, March, 1914).

Clinical Summary

Practical hints from articles and abstracts that have appeared in the Monthly Cyclopedia and Medical Bulletin during the current year.

Acne. TREATMENT. Acne vulgaris in childhood or adolescence responds well to thyroid treatment. Thymus employed with advantage in cases with enlarged thyroid and rapid heart. *Morris.* Page 11

1. Internally: Equal parts of precipitated sulphur and milk-sugar; patient to swallow several times a day as much as is held on tip of a penknife. 2. Externally: Paint at night with a mixture of 10 parts of sulphur, 25 parts of alcohol, and 5 parts of glycerin. 3. Regulate bowels. 4. Meat, eggs, cheese, and sugar to be avoided. 5. Later, a ten- to fourteen- day course of Röntgen-ray exposures, one-third or one-fourth erythem doses being applied at 6 or 8 sittings, to a total of one and a half erythem doses. 6. Four or five weeks after this course, application of mercury quartz lamp for twenty or twenty-five minutes. The skin is to be carefully protected for eight or ten days and then gone over with the comedo extractor, any red spots left being treated with sulphur. *Kromayer.* 357

Acne Keloid. TREATMENT. In early cases small, isolated nodules may be excised; they do not recur if the incision is free of the circumscribed sclerotic mass constituting the nodule. *Adamson.* 357

Acromegaly. TREATMENT. Case of acromegaly in which thyroid treatment caused headache, dizziness, vomiting, and melancholia to disappear, while pituitary treatment always caused their return. *Salomon.* 30

Alopecia Areata. TREATMENT. (1) The B. P. unguentum hydrargyri iodidi rubri (diluted from 4 to 2 per cent.); (2) the unguentum hydrargyri oxidi rubri, with acetum cantharidis, ℥j to ℥j, and (3) equal parts of sodium chloride and petrolatum found seviceable in this condition. Pure phenol often gave good results. Causes of peripheral nervous irritation, such as carious teeth, errors of refraction, or aural defects, to be investigated. In severe cases pilocarpine nitrate, injected into the scalp every week or fortnight in doses of 1/10 to 1/6 grain, is sometimes beneficial. *Dore.* 358

Amenorrhea. TREATMENT. In amenorrhea, flooding, dysmenorrhea, etc., mammary extract treatment often proves corrective. *Berkeley.* 20

In amenorrhea, relative or absolute, ovarian extract considered best remedy by author. *Bandler.* 91

Anemia. TREATMENT. Joint administration of ovarian extract with iron and arsenic in anemias, including chlorosis, in females, recommended. *Bandler.* 91

Angina Pectoris. TREATMENT. Concussion at level of seventh cervical vertebræ, together with hypodermic injection of 1/10 grain (0.006 Gm.) of pilocarpine, to increase vagus tone, gives relief more promptly than does morphine. *Jarvis.* 160

Ankylostomiasis. TREATMENT. Betanaphthol in 30-grain (2 Gm.) doses given the first thing every morning is likely to prove more effectual than eucalyptus or thymol. Starvation of patient during such treatment is unnecessary; in bad cases it may be harmful. *Keith.* 165

Arthritis, Chronic. TREATMENT. Injections of phenol-camphor used with benefit. Must be made only into joint, never into spongy bone. Formula: Phenol, 30; camphor, 10; alcohol, 30. Only 0.5 or 0.25 c.c. is injected at one point, except in streptococcic processes, where 2 c.c. are necessary. *Pohl.* 235

Arthritis Deformans. TREATMENT. Gradual but permanent improvement noted in a number of cases after administration of thymus extract. Pain and swelling disappear and appetite returns. Nucleoproteid extract much preferable to crude gland. Treatment should cover several months, and small doses be continued for some time after apparent cure. *Berkeley.* 20

Bronchitis, Acute. TREATMENT. Inhalations of recently prepared tincture of iodine from wide-mouthed bottles found to cure bronchial catarrhs in four days. Inspirations —from 4 to 8 or more at each sitting—to be more or less deep according to severity of case. Inhalations to be repeated 5 or 7 times a day. If much mucus, expectoration to be assisted by usual remedies. In children iodine tincture may be dropped on pieces of cotton to be laid on pillow (over oilcloth) while patient sleeping. *Torri.* 303

Bronchopneumonia. TREATMENT. Hot baths, followed by brief cold affusion, in acute bronchitis, bronchiolitis, and bronchopneumonia in young children reduce fever, stimulate expectoration, deepen breathing, exert soporific effect, improve appetite, stimulate elimination through skin, and seem to act specifically in shortening disease. Bath water is at 41° C. (105.8° F.), hot water being added as cooling occurs. Patient is bathed every three hours, up to 5 times a day. Baths particularly appropriate for feeble children who became chilled at periphery with internal temperature high. The weaker the child and higher the fever, the more frequently baths are given. Where the

temperature not above 39° C. (102.2° F.), ten-minute bath is given 3 times a day. Hot bath is not contraindicated where temperature exceeds 40° C. (104° F.) in infants or very young children, though for older children warm baths may be substituted. At conclusion of each bath nurse elevates child from hot water so back of neck is exposed, and cold water is dashed once over neck, causing reflex gasp for breath. Child is next reimmersed momentarily in hot water and cold water poured on chest, after which he is dried, wrapped in warmed clothes, and placed in warmed bed. Baths to be continued once daily into convalescence if patient coughs. *Arneth.* Page 55

Burns. TREATMENT. (1) Hypodermic injection of morphine and atropine. (2) Immerse burned area in, or cover with light cloth moistened with, cold water to which has been added 1 teaspoonful of sodium bicarbonate or chloride per quart; continue until morphine effect manifest. (3) Spray or mop burn and surrounding surface with hydrogen dioxide, mop with dry gauze, apply gauze strips dipped in 2 per cent. picric acid solution in dilute alcohol, and cover with thin layer of cotton and adhesive strips or bandage. Allow dressing to remain till soiled, then reapply. (4) About third day, open blisters and mop away contents. (5) Where sloughing: Remove dead tissue as it loosens, cleanse surface with dioxide, dry, mop with picric solution, put on strips of rubber tissue previously kept in 1:1000 mercury bichloride solution, and cover with picric acid compress and cotton. *Plain.* 299

Cancer. DIAGNOSIS. Marked diminution of the area of cardiac dullness in the recumbent posture, as determined by percussion, found in 87 per cent. of 111 cancerous cases and only 16 per cent. of 107 noncancerous cases. This sign may be present in cancerous cases that show no wasting. When the sign is present, diagnosis of carcinoma should be rejected only after careful consideration. In some cases the sign has appeared early enough to enable successful resection to be carried out. *Gordon.* 234

Cancer, Gastric. DIAGNOSIS. Positive or negative diagnosis made by serial röntgenography in 616 cases. Of 97 cases operated on, diagnosis found absolutely correct in 94. Gastric cancer at any stage, or indurated gastric ulcer, can be detected by this method as accurately as renal calculi or bone fractures. *Cole.* 301

Cellulitis. TREATMENT. Packing infected arm from fingers to shoulders in hot mixture of saturated magnesium sulphate solution and glycerin in equal parts found to control infection promptly. *Freese.* 304

Constipation. TREATMENT. Constipation and rectal irritation in neurasthenics greatly benefited by the perineal and anal douche, hot as can be borne, followed by cold douche at 60° to 50° F.; stronger revulsive effects are obtainable with an alternate hot and cold application. *Pope.* 50

Corneal Ulcer. TREATMENT. Bathing part with 1 per cent. ethyl hydrocupreine solution for one-half minute every hour, six hours first day and twelve on next, found rapidly effectual in a case of ulcus serpens with hypopyon from chronic dacryocystitis. Sac expressed and conjunctiva cleansed with boric acid before each treatment with ethyl hydrocupreine, which was dropped on the ulcer. Practically specific against pneumococcic infections. *Wiener.* 168

Delirium Tremens. TREATMENT. (1) Withdraw cerebrospinal fluid by lumbar puncture in amounts as large as possible—50 to 60 c.c. (2) Inject with syringe an equal amount of sterile 1 per cent. sodium bromide solution. Immediate improvement in delirium usually occurs, followed by temporary return and then permanent disappearance of delirium. Relapse occasionally after a few days; usually controlled by repetition of injection. *Kramer.* 110

Dengue. TREATMENT. Three out of 7 cases were rapidly improved by administration of 30 drops of a 1:1000 solution of epinephrin by the mouth. Epinephrin is likely to prove useful in shortening convalescence in this disease and in mitigating the grave cases. *Khoury.* 329

Diabetes Insipidus. TREATMENT. Case in which injections of pituitrin caused marked, though but temporary, inprovement. *Farini.* 277

Diabetes Mellitus. DIAGNOSIS. Frommer's test recommended for detection of small amounts of acetone. Treat about 10 c.c. of urine with 1 Gm. of sodium hydroxide in substance and without waiting for it to dissolve; add 10 or 12 drops of a 10 per cent. solution of salicylaldehyde in absolute alcohol. Heat to 70° C. In the presence of acetone, marked purple-red color develops at zone of contact with alkali. This test indicates presence of 0.000001 Gm. of acetone. Urine must be diluted so that its specific gravity is about 1.01. *Muhlberg.* 232

TREATMENT. Therapeutic value of an "easy nitrogenous diet" pointed out, *i.e.*, of one consisting almost exclusively of milk and its derivatives, cereals, fruits, and vegetables. Such a diet partially takes off burden of nitrogenous metabolism from liver and tends to relieve its instability as regards glycogenic function, therefore often causing glycosuria to disappear. *Cornwall.* 110

Dry vegetable diet recommended for cases in a state of acidosis. Patient to take daily 10 ounces (300 Gm.) of dried legumins (peas, beans, lentils), 5 ounces (150 Gm.) of butter, 3 to 6 eggs, and 3 to 6 aleuronat or gluten rolls. Green legumins may also be given. Soy beans may be used. This diet to be fol-

lowed at least 3 days at a time. The starch it contains is better utilized than that of other foods, glycosuria often being not higher than under a diet poor in carbohydrates. The diet also combats nitrogenous loss; somnolence and anorexia, where present, often disappear, and diaceturia diminishes. *Labbé.* Page 300

Diphtheria. TREATMENT. Iodine ointment used locally in 30 cases. With 2 cotton pledgets secretions and false membrane were first removed and the surface dried, and a third pledget, smeared with the ointment, was then rubbed on the affected surface and surrounding area. This was done every 3 hours, or in severe cases every 2 hours, until improvement occurred. Many cases cleared up within a few hours, becoming free of false membrane on the second or third day. *Thomas.* 364

Dysentery, Bacillary. TREATMENT. In acute form: (1) Rest and warm covering; (2) only small amounts of food at a time; (3) calomel at the outset; (4) acid drinks; (5) enemata of saline or soda solution or of methylene blue. In chronic form: (1) Rest; (2) enemata of 1:500 or 1:1000 silver nitrate, 0.25 to 0.5 per cent. tannic acid, 1:500 or 1:1000 thymol, 1 to 2 per cent. resorcinol or creolin, or enemata of gum arabic mixed with bismuth subgallate or iodoform; (3) phenyl salicylate, tannigen, ichthyol, or calomel internally; (4) serum treatment, 10 c.c. in mild cases, 10 c.c. twice at six- to ten- hour interval in medium cases, and 40 to 60 c.c. in severe cases, not exceeding 20 c.c. at a time when serum used daily; (5) appendicostomy or cecostomy with irrigation in severe cases. *Bassler.* 111

Dysmenorrhea. TREATMENT. Cocaine applied to tuberculum septi in nose and anterior portion of inferior turbinate on both sides, followed by application of trichloracetic acid over these spots, in 93 cases. Four applications made between periods. Cases with premenstrual headache, nausea, and colic at onset of flow—but without organic pelvic lesions—completely relieved. Of 81 cases sending subsequent reports, 48 had been cured and 14 improved. *Mayer.* 167

Atropine found very useful, except in cases with high blood-pressure, when pressure must be reduced and cause sought and removed. *Stolper.* 235

Eclampsia, Puerperal. TREATMENT. Report of 2 cases in which pituitary extract injections—2 in each patient—yielded successful results, labor being brought on thereby. *Schlossberger.* 28

Eczema. TREATMENT. Both chronic and acute forms respond to thyroid treatment. Fat subjects and those with xerodermia respond best. *Morris.* 11

In mild acute cases paint on lesions an aqueous solution of picric acid several times daily; in more severe cases apply wet dressings of the acid, held by facial mask. Prompt and gratifying results. In subacute and chronic types cure hastened by beginning treatment with two or three days' application of picric acid solution. *Wilcox.* 176

Edema, Angioneurotic. TREATMENT. Pituitary and adrenal preparations found useful. *Morris.* 11

Epilepsy. TREATMENT. Four patients with severe essential epilepsy treated with subcutaneous injections of cerebrospinal fluid, taken for each from another epileptic. Considerable benefit. Dose of fluid injected, 3 to 5 c.c. biweekly or weekly. Improvement striking both as to severity and frequency of attacks. In some, petit mal took place of grand mal. Greatest improvement noticed especially if injected fluid was taken from other patients during recurrent attacks, no matter how slight the latter. *Gordon.* 235

Epistaxis. TREATMENT. Subcutaneous injection of 8 minims (0.5 c.c.) of pituitrin brought early relief in 5 cases. *Citelli.* 279

Epithelioma. TREATMENT. Concentrated sunlight, focused on growth with ordinary magnifying glass, found effectual. Useful where X-rays and radium not available. Invariably successful in obstinate recurrent ulcerative patches on face or nose. Focus sunlight on sore for ten or fifteen minutes at a sitting. If scab present, concentrate rays till burning is felt, then lengthen focus to cover wider area. Induce burning again every few minutes. Treat every day or two till scab easily removed, then apply a little cocaine and after three or four minutes apply rays so as almost to cauterize base of ulcer. Alternate with milder applications for fifteen minutes. Under milder treatments thereafter, at longer intervals, cure usually complete in three to six weeks. *Seelye.* 166

Erysipelas. TREATMENT. In severe erysipelas a single small vaccine inoculation,—5 million,—preferably of autogenous vaccine, will usually cause a critical fall of temperature, and a second or third dose at about five days' intervals generally completes resolution. *Whitfield.* 56

In facial erysipelas: Have beside bed bowl of boric acid solution in which ice is placed. Keeping cloths frequently moistened with the solution continuously on face effectually relieves pain and burning. Where leg or arm involved: Wet dressings of boric acid or aluminum acetate. In migratory cases: Ichthyol may be applied or surfaces painted with picric acid solution. *Erdman.* 112

Pyramidon used in 20 cases with uniformly favorable results: Diaphoresis, antipyresis, sedation, fading of eruption, which ceases to spread, and improved general condition. Diuretic beverages also given. Locally, following ointment used: Phenolis, camphoræ pulveris, ana gr. xv (1 Gm.); adipis lanæ hydrosi, petrolati, ana ℥ss (15 Gm.). *Satre.* 167

Discomfort and pain more rapidly relieved by picric acid solution than other agents, and edema disappears promptly. *Wilcox.* Page 176

Erythema. TREATMENT. Epinephrin used in 3 cases of erythematous taches of the face ("red nose"). A 1:1000 solution was given internally in 5-minim (0.3 c.c.) doses in water 3 times daily half an hour before food, and the treatment continued during five to six months (with short intervals). The erythema almost entirely disappeared, and a year and a half after treatment it had not reappeared. No bad effect on the heart or blood-pressure was observed. *Rothmann.* 348

Felon. TREATMENT. Mixture of saturated magnesium sulphate solution and glycerin in equal parts found to control infection in an unusually short time. *Freese.* 304

Fracture of External Malleolus. TREATMENT. Case of oblique fracture of fibula, involving malleolus, in which, great pain continuing after splinting, the malleolus was exposed by rectangular incision and, after detachment of external lateral ligament, entirely removed. The foot was splinted at a right angle to the leg. Pain ceased, and on the twelfth day the patient could stand on the foot without discomfort. Similar treatment recommended for all detached external malleoli. *Bland-Sutton.* 360

Fracture of Femoral Neck. TREATMENT. In adults the author recommends the addition of a side pull to the Buck extension. The side pull is exerted on the upper end of the thigh by means of a weight and pulley, the latter being placed opposite the crest of the ilium. It can be attached to the wall, a standard, or the side of the bed, and should be so adjusted that the pull is upward and outward at an angle of 45 degrees. The amount of weight at the foot of the bed should be sufficient to overcome the shortening, and the side weight about one-third of the foot weight. A well-padded splint of surgeon's felt, or sole leather, should be applied to the inner and under sides of the thigh, coming well up to the perineum, and fastened to the thigh by adhesive plaster encircling the limb. A band made of several layers of gauze or cheesecloth is convenient for the side pull. It should be fastened to the splint by adhesive plaster. By shortening the lower arm of this gauze the limb can be rotated inward, thus avoiding eversion. *Moore.* 361

Fracture, Ununited. TREATMENT. Osmic acid, 0.02 Gm. in 1 per cent. solution, injected directly into focus in a case of ununited fracture of fibia and fibula, rebellious for six months. Injection repeated 3 times in two weeks. Patient discharged two weeks later. Stimulating action of the acid on periosteum and marrow confirmed in rabbit experiments. *Segrè.* 307

Furunculosis. TREATMENT. Where boil already soft: (1) Paint tincture of iodine freely over and around it; if several lesions close together, paint over entire area. (2) Place gauze pad with 10 per cent. ichthyol in petrolatum over the area, cover with a little cotton, and hold with bandage. (3) Next day, remove pus, wipe with benzine, and reapply iodine and ichthyol. (4) When pus entirely absorbed, discontinue iodine, but apply pure ichthyol. (5) To activate epithelial growth where necessary: Argenti nitratis, gr. xv (1 Gm.); balsami peruviani, gr. lxxv (5 Gm.); adipis lanæ hydrosi, ʒiiiss (100 Gm.).—For a furuncle not yet softened: (1) Apply iodine. (2) Thick coating of ichthyol, to be allowed to dry on or covered with a little absorbent cotton and gummed adhesive. (3) Next day, wipe off ichthyol with warm water or if possible wash area with soap and water, and reapply iodine and pure ichthyol. (4) Stop iodine on third or fourth day, continuing ichthyol till all inflammation subsided. Single layer of gauze, tissue, or cigarette paper may be applied when ichthyol has dried. *Berger.* 113

Gastric Atony, Acute. TREATMENT. Continuous lavage of stomach through nose recommended. Cocainize nose and work soft oiled tube with 8 to 11 mm. lumen down into stomach. Attach longer tube and carry to receptacle. Amounts up to 5 liters thus drain away. Keep outlet of tube at level of bed to prevent aspiration of mucous membrane. *Grosser.* 305

Gastroenteritis, Infantile. TREATMENT. *B. lactis bulgaricus* in tablet form administered in 55 cases, varying in severity from moderate degrees of infection—6 stools a day—to the most grave—20 or more. From 3 to 10 tablets a day were given to each infant, according to the gravity of the illness. Results: 43 gained in weight; 2 lost; 3 gained and later lost, and 7 showed no change. There were no deaths. The temperature came down to normal within one to three days, and in two or three days the stools became yellowish or brown, well formed, and free from curds, mucus, and blood. *Schwartz.* 364

General Paralysis. TREATMENT. Remissions may be prolonged by suitable doses of tuberculin ($\frac{1}{1000}$ to $\frac{1}{5000}$ mg. of tuberculin residue). *Jackson.* 236

Glaucoma. TREATMENT. In non-inflammatory glaucoma, when operation is consented to, Elliot's sclerocorneal trephining is by far the safest procedure and the most productive of results. In 29 cases thus treated there were no serious complications at operation in any case. Seven eyes with absolute glaucoma were preserved that formerly would have been removed. In 7 other eyes which were sightly a small degree of vision was gained by the operation. In the remaining 15 the eyes gained considerably in vision and usefulness. *Reber.* 362

Goiter. TREATMENT. Vaccines prepared from coliform bacilli of patient's own bowel administered in 8 cases of parenchymatous goiter, with disappearance of enlargement in one and diminution in the others. Initial dose usually 125 million, later increased, upon diminution of size of goiter, by 25 or 30 million weekly. Injections given weekly. *Langmead.* Page 23

Salicylates, creosote carbonate, menthol, thymol, etc., are helpful after the intestinal functions have been regulated. In nodular, cystic, colloid, fibrous, and intrathoracic goiters, iodine is seldom of value and sometimes dangerous. *Sajous.* 1

Colloidal silicon injections used with benefit in a case of simple goiter. Trial of this measure is advised in both simple and exophthalmic goiter before operation is resorted to. *Suard.* 345

Goiter, Exophthalmic. TREATMENT. Ligation of thyroid vessels and sometimes a portion of the gland is indicated (1) in patients with mild symptoms of hyperthyroidism; (2) in the large group having acute, severe exophthalmic goiters, and the chronic, very sick patients who, having exhausted all forms of treatment, are suffering from various secondary symptoms, and (3) in cases with marked pulsation and thrill of thyroid arteries associated with cardiac dilatation and loss of weight. Thyroidectomy later advisable, to prevent relapse to former condition. Should trouble recur before a partial thyroidectomy is made, or a severe relapse after partial extirpation, inferior thyroid artery should be ligated and half of remaining lobe removed when improvement occurs. *Mayo.* 16

In early and mild cases in virgins, author begins treatment with corpus luteum, which is useful as antidote to thyroid intoxication. *Berkeley.* 20

Report of cases improved by administration, for several months, of 20 to 30 Gm. (5 to 8 drams) of quinine divided among twenty days in each month. *Gaultier.* 90

Gonorrhea. TREATMENT. Iodine treatment gave excellent results in gonorrhea in the female: (1) Swab external genitals with a 3.5 per cent. solution of iodine in alcohol; (2) force a few drops of same solution in orifices of Skene's and vulvovaginal glands through blunt hypodermic needle; (3) with patient in Sims's position, insert Sims's speculum, swab vagina dry with cotton, and paint cervix with iodine solution; (4) swab posterior vaginal *cul-de-sac* and wall; (5) introduce narrow strip of gauze high up against posterior wall, and remove speculum; (6) give hexamethylenamine, 5 to 7½ grains (0.3 to 0.5 Gm.) four times daily in plenty of water. Where cervix and uterus chronically involved: (1) Paint cervix with iodine; (2) grasp anterior lip with volsellum and remove any stringy discharge; (3) insert small uterine sound if required; (4) introduce intrauterine syringe to fundus and instill 1 dram (4 c.c.) of iodine solution while withdrawing; (5) treat vagina as in acute cases. Repeat applications every third day in both acute and chronic forms. In all cases order hot douches of 4 to 6 quarts (liters) of hot saline two to four times daily, always followed by a 1-quart (liter) injection of 1:5000 permanganate or 1:250 picric acid. *Hofmann.* 48

Gonorrheal Vaginitis of Children. TREATMENT. Mixed autogenous vaccines of gonococcus and usually staphylococcus, streptococcus, diplococcus, colon bacillus, etc., used in 40 cases with uniformly good results. Average number of injections required for cure, 7. Initial dose, 25 to 50 million, then gradually increased. Interval between injections not less than five nor more than seven days. If after six weeks case still needs treatment, as shown by examination of discharges, a second vaccine should be made. *Wolff.* 49

Headache. TREATMENT. In headache or head pressure in nervous fatigue a fomentation applied for five or ten minutes twice, and followed by a cold compress, is effective. If headache is congestive, use hot foot bath, followed by ice-bag to nape of neck and cold compress to forehead. Sitz baths at 90° F., or cold foot baths, often relieve. *Pope.* 50

Hemoptysis. TREATMENT. Subcutaneous injection of 8 minims (0.5 c.c.) of pituitrin nearly always brings relief in average cases. Where first injection fails, give a second, and later if necessary a third, the latter intramuscularly. *Citelli.* 279

Hemorrhage, Cerebral. TREATMENT. Venesection used with good results and recommended in cases of apoplexy in full-blooded patients with blood-pressure of 200 mm. or more. Amount of blood let in author's cases, 12 to 48 ounces. Where vein at elbow not easily found in stout persons, there are usually varicose veins in legs which can be opened. *MacFarlane.* 121

Hernia. TREATMENT. Inversion of hernia recommended in patients who take anesthetic poorly and maintain strong expiratory efforts, forcing viscera into sac under pressure. Primary union and cure of hernia in each of author's 7 cases thus dealt with. *Haynes.* 170

Herpes Labialis. TREATMENT. Picric acid solution causes rapid drying of lesion and tends to prevent extension. *Wilcox.* 176

Hodgkin's Disease. TREATMENT. Benzene, 5 minims (0.3 c.c.) three times daily at first, then increased to 10 minims (0.6 c.c.), caused marked regression of enlarged nodes, beginning two weeks after treatment begun, in a case previously treated unsuccessfully with X-rays. The 10-minim dose was continued for six weeks. *Lawson and Thomas.* 173

Hyperchlorhydria. TREATMENT. Cream diet considered useful. (See Ulcer, Gastric.) *Nichols.* Page 169

Following measures recommended: (1) Magnesium oxide, combined with sodium sulphate and belladonna in small amount. (2) All food to be well cooked and most carefully minced. (3) Patient to take 2 or 3 meals at two-hour intervals in forenoon, but nothing after lunch until 7 P.M., when only porridge to be taken. (4) Fluid intake to be generally diminished and restricted to hours when stomach not filled with food. (5) In severe cases, or where gastroptosis: Rest in bed for two or three weeks. (6) Hot compresses twice daily for two hours; cold compresses at night. (7) If hyperacidity arises on basis of a catarrh: Rinse empty stomach in morning with 1:1000 salicylic acid or 1:500 silver nitrate solution. (8) Bowels to be carefully regulated. *Schmidt.* 302

Hyperthyroidism. TREATMENT. Injection into enlarged thyroid of 1 to 4 per cent. solutions of quinine and urea hydrochloride caused marked improvement in 3 cases. *Watson.* 265

Ileus. TREATMENT. Continuous lavage of stomach through nose recommended in duodenojejunal occlusion, postoperative bowel paralysis, ileus from adhesions, spasmodic contraction from peritonitic reflexes, and vicious circle after gastroenterostomy. (See Gastric Atony, Acute.) *Grosser.* 305

Impetigo. TREATMENT. In exceptional cases which do not yield to local measures, a few staphylococcic vaccine inoculations—usually, in fact, a single one—will cause prompt cure. *Whitfield.* 56

Infections, Local. TREATMENT. Following summary of serviceable measures present: *A.* Inflammations with slight serum exudation, but with redness, heat, swelling, pain, and loss of function: 1. Rest. 2. Elevation. 3. Hot, wet dressing.—*B.* Where much serum exudation, but slight tendency to necrosis: 1. Incision. 2. Place gauze in wound saturated with Chlumsky's solution. (Camphor, 60 parts; phenol, 30; alcohol, 10.) 3. Wet dressing; keep wet. 4. Remove gauze in twenty-four hours. 5. Insert rubber drain. 6. Apply wet dressing.—*C.* Where marked necrosis: 1. Incision. 2. Drainage. 3. Wet dressing. 4. After inflammation receded, Durante's solution. (Iodine, 1 part; potassium iodide, 10; guaiacol, 5; glycerin, to make 100.) 5. Dry dressing. *Hoag.* 307

Insanity. TREATMENT. Recovery in manic-depressive insanity may be hastened by stimulation of leucocytosis by injection of 1 c.c. of terebene subcutaneously in the flank. *Jackson.* 236

Insomnia. TREATMENT. In nervous fatigue (neurasthenia) this symptom is best met by cold pack or dripping-sheet at bedtime, or by the trunk compress, consisting of a coarse linen bandage wrung out of water at 65° F. and covered by several layers of same material to exclude air; it should be worn all night. Excellent also is the neutral bath at 94° to 96° F. for from twenty to sixty minutes. *Pope.* 50

Intertrigo. TREATMENT. Paint picric acid solution on surfaces and separate them with thin layers of absorbent cotton. In the more severely infected cases wet dressings of picric acid. Prompt results. *Wilcox.* 176

Intestinal Motor Inactivity. TREATMENT. Pituitary extract recommended. Injection of 3 c.c. in adults causes evacuation in 88 per cent. of cases in from six to twenty minutes. Usually constipation later recurs, but often a single injection will induce several stools on same day and keep bowels regular for a day or two after. The extract is valuable for prophylaxis and cure of postoperative intestinal paresis. Continued, it tones up intestine and also stimulates stomach motility. For lasting effect, inject ½ c.c. intramuscularly every day for a week, then 1 c.c. every three days for another week, and thereafter 1½ c.c. once weekly. *Houssay and Beruti.* 27

Intestinal Stasis, Postoperative. PROPHYLAXIS. Harmful effects of abrasion of visceral peritoneum in operations can be overcome by introducing 6 ounces (180 c.c.) of sterilized mineral oil in abdomen and sponging it over coils of intestine. *Burrows.* 52

Lumbago. TREATMENT. Salicyl compounds or a 10- or 20- grain (0.6 or 1.2 Gm.) dose of quinine at onset of condition useful. Rochelle salts, ½ to 1 dram (2 to 4 Gm.) every hour or two until urine alkaline and bowels freely moved, also valuable. "Walking the lumbago off" may succeed if free perspiration accompanies the exercise. Turkish bath in early stage safer and more effective. Later: Rest, dry cups locally, deep massage, faradic current, and, if salicylates fail, iodine, in vegetable protein combination. *Henry.* 175

Lupus Erythematosus. TREATMENT. Benefit followed use of adrenal substance in this condition. *Morris.* 11

Lupus Vulgaris. TREATMENT. Where Finsen light not available, old tuberculin is capable of great service. Begin cautiously; then make steep rise in dose as soon as one dose ceases to call forth reaction. *Whitfield.* 56

Gold and potassium cyanide injected intravenously in 12 cases. Single dose, 0.01 to 0.05 Gm. Results good. Course of 12 to 14 injections followed by interval of two to three weeks, after which another treatment given. Even in severe cases, therapeutic results better than with tuberculin and other measures. *Poór.* 236

Mammary Abscess. PROPHYLAXIS. Threatened mammary abscess underwent ab-

sorption in 2 or 3 cases soon after administration of pituitary extract. *White.* Page 283

Myasthenia Gravis. TREATMENT. Pituitary extract, combined with ovarian, found useful in 2 cases. *Lagane.* 85

Obesity. TREATMENT. Colloidal hydroxide of palladium, suspended in olive oil and liquid paraffin in proportion of 25 mg. of palladium to 1 c.c., caused marked loss of weight, without untoward action except some local irritation, in 2 cases of obesity. Dose, 2 c.c. of suspension, injected under skin of abdomen. *Kauffmann.* 116

Osteomalacia. TREATMENT. Case in which excellent results obtained from epinephrin, injected in doses of 8 minims (0.5 c.c.) of 1 : 1000 solution, daily, in 2 series of 9 injections each. Patient finally discharged cured. *V. Salis.* 278

Ozena. TREATMENT. Use of sugar recommended. For first week or two surgeon should carry out treatment himself, and precede sugar by removal of crusts from nose, softening them if necessary with hydrogen dioxide or sodium bicarbonate solution. Patient to use nasal syringe once daily. After crust removal, massage mucosa with cotton-tipped probe; then nostrils may be packed with ribbon gauze soaked in simple syrup, to be removed in twelve hours. Repeat this treatment on alternate days. After a fortnight patient can insufflate powdered sugar himself. *Harry.* 175

Paralysis Agitans. TREATMENT. Good results from administration of thyroid and parathyroid preparations with calcium chloride. *Gauthier.* 86

Perinephric Abscess. DIAGNOSIS. Pain referred to lower limb of same side found of considerable diagnostic value. There are both pain and tenderness, particularly marked along external cutaneous nerve just below anterior superior spine and on external aspect of thigh. *Belikov-Chtomitch.* 117

Placenta Previa. TREATMENT. In marginal variety, inject 30 minims (2 c.c.) of pituglandol and at once rupture membranes. In central variety, according to extent of dilatation, perform version or introduce metreurynter and give pituglandol. Metreurynter generally expelled spontaneously in one-half hour. Then perform version and give second dose of pituglandol. *Gall.* 280

Pneumonia. TREATMENT. Ethyl hydrocupreine hydrochloride given internally in pneumococcic lung inflammation, with good results. Dose usually 0.5 Gm. (7½ grains) *t. i. d.*, daily amount not exceeding 1.5 Gm. (23 grains). In 9 cases no other medication was employed: in all of these temperature fell more rapidly, by crisis or lysis, than with other methods. No untoward after-effects. *Vetlesen.* 118

Vaccine treatment advised. First give polyvalent stock vaccine of pneumococcus and streptococcus, of each, 30 million, as soon as possible. Make sputum smears and cultures, blood-cultures in early cases, lung puncture in late ones, and prepare autogenous vaccine. If no definite response in twenty-four to forty-eight hours, repeat or preferably give autogenous vaccine. If still no response in thirty-six or forty-eight hours, double the dose. If there is response, as shown by improved clinical symptoms and signs, increased well-being, etc., defer reinoculation three days, or until the first symptoms of retrogression in general condition or physical signs occur. Maintain the dosage or increase it every two or three days until the patient entirely well. Generally about three doses are necessary. Average mortality with vaccine treatment only 5 to 10 per cent. Convalescence shortened and danger of complications lessened. In severe cases also give 20 to 30 grains of sodium citrate every two or three hours. *Craig.* 238

Epinephrin, 8 minims (0.5 c.c.) of 1 : 1000 solution in 1 pint (500 c.c.) of saline solution subcutaneously, caused prompt improvement in a desperate case. *Lonhard.* 281

Poliomyelitis, Acute. DIAGNOSIS. Preparalytic symptom: A peculiar, twitching, tremulous, or convulsive movement of certain groups of muscles, lasting from a few seconds to somewhat less than a minute. Usually affects part or whole of one or more limbs, face, or jaw, but sometimes whole body. Duration of spells short at first. Often accompanied by a cry similar to hydrocephalic, or by brief period of unconsciousness. *Colliver.* 177

Psoriasis. TREATMENT. Thyroid preparations found especially efficacious in psoriasis associated with adiposity. They should not be exhibited until eruption is fully developed. *Morris.* 11

Low nitrogen diet found to have very favorable influence upon psoriasis eruption, especially when extensive. Severe cases improve under such a diet almost to the point of disappearance of the eruption. *Schamberg, Kolmer, Ringer, and Raiziss.* 178

Application of picric acid solution brings immediate and constant relief from itching. *Wilcox.* 176

Puerperal Fever. PROPHYLAXIS. Whenever irrigation of vagina with boiled water through speculum yields a yellowish fluid, one should irrigate once daily for at least ten days with a 1 : 200 solution of lactic acid. Morbidity thereby reduced from 28.6 to 7.6 per cent. Full baths to be avoided before delivery. *Zweifel.* 54

TREATMENT. Intravenous injections of distilled water given in 142 cases of puerperal fever. Of 62 patients with pyemia and septicemia, 42 were cured. In an hour or hour and a half after an injection there is usually a chill, with rise in temperature. By evening or the following morning temperature will

have fallen to normal, sweating usually accompanying the drop. *Ilkewitsch.* Page 53

Puerperal Sepsis. TREATMENT. Fixation abscess recommended in this and other severe infectious states, including pneumonia, appendicitis, typhoid fever, etc., whenever condition seems to be taking a turn for the worse. Inject 2 c.c. of pure oil of turpentine under gluteal skin. When abscess forms, evacuate through small incision (do not drain) and apply Bier cups twice daily. Excellent results in 18 cases. *De Lostalot.* 168

Pyloric Spasm. TREATMENT. Atropine in a certain proportion of cases brings relief. The author found that epinephrin hypodermically procures complete and lasting relief in most instances. In 2 cases the palpable pyloric tumor could be felt to melt away under its influence. Prolonged gastric lavage, using water at 105° F., also has a happy effect in relieving spasmodic stomach conditions. *Stockton.* 367

Pyorrhea Alveolaris. TREATMENT. Sensitized vaccine against streptococcus, staphylococcus, pneumococcus, and bacillus of Friedländer used in a number of cases. After 2 injections, mechanical and dental treatment added. After 4 or 5 injections, teeth clean and firm, and organisms gone. Three or four supplementary injections given. No recurrence in six months. *Bertrand and Valadier.* 304

Rabies. TREATMENT. Potassium iodide in 2 per cent. solution, 1 tablespoonful or dessertspoonful at frequent intervals throughout course of preventive injections, recommended as adjuvant in treatment. In 3 cases of abortive rabies symptoms promptly disappeared after use of potassium iodide. Advocated especially in cases where infection has existed in latent condition for some time. *Koch.* 55

Rachitis. TREATMENT. Pituitary extract given to 16 young children with rickets, and effects compared with controls. After a few weeks of pituitary, the children were able to stand and began to walk; fontanelles began to close and growth of teeth was considerably accelerated. Osseous tenderness gradually diminished, weight was gained, and musculature became firmer. *Weiss.* 218

Retention of Urine, Postoperative. TREATMENT. Pituitary extract injected intramuscularly in 21 puerperal and 24 postoperative cases with excellent results. *Ebeler.* 91

Ringworm. TREATMENT. Body ringworm more easily controlled by painting on picric acid solution than by usual antiseptic ointment. *Wilcox.* 176

Scarlet Fever. TREATMENT. Iodine ointment used locally in 19 cases (see Diphtheria). These cases were unusually free from local complications. *Thomas.* 364

Sciatica. TREATMENT. Eight cases treated by injections of 4 per cent. quinine and urea hydrochloride in salt solution into subcutaneous tissue over course of nerve. Fifty injections in all, without untoward results. Always decided relief after first injection and no further attack after third. Injections daily for 4 doses, then every other day until patient entirely relieved. Two cases of facial neuralgia also treated, with complete relief after second injection. *Cables.* 119

Skin-grafting. Following method of dressing skin-grafts just after their application described: Strips of gauze, 6 to 8 layers in thickness, are thoroughly impregnated and buttered with sterile 33⅓ per cent. bismuth paste (Beck's paste). These are laid over the grafts smoothly for 2 or more inches beyond the wound. No wrinkles or folds should remain. Over these is placed a layer of absorbent cotton, and the whole held firmly by a roller bandage. The first dressing should be done on the fifth day, great care being exercised in the removal of the primary dressing. A similar dressing is reapplied and subsequent dressings done every third or fourth day as required. At about the fifth dressing one can peel from each graft a thin film of dead cuticle, leaving a firm, pink, healthy graft in position. *Coerr.* 358

Spasmophilia in Children. TREATMENT. Combined treatment with phosphorized cod-liver oil and milk curds from which the whey had been removed by washing with water (thus removing all mineral salts) was employed in 12 cases. A cure was obtained in 9 cases within a week, twice at the end of the second, and once in the fourth week. There was loss of weight, but this was soon made up on return to full milk diet. *Bernheim-Karrer.* 368

Syphilis. DIAGNOSIS. Luetin test valuable as diagnostic measure in tertiary and latent stages of syphilis, indicating a state of hypersensitiveness to spirochetal proteins induced by a period of cessation of introduction of these proteins previous to the test. Provocative injection of salvarsan, followed by both Wassermann and luetin tests, suggested to ascertain whether treatment has been curative in a given case. *Foster.* 179

TREATMENT. Epinephrin, 15 to 20 drops of 1:1000 solution in a little water by mouth, advised ten to fifteen minutes before injection of neosalvarsan, to prevent "nitritoid" symptoms, arising in some patients from the latter, *e.g.,* facial congestion, tingling in throat, nausea, and vomiting. *Galliot.* 212

Tonsillitis, Ulcerative. TREATMENT. After thoroughly washing surfaces and crypts, apply 10 per cent. silver nitrate solution over ulcerated surface and carry down into crypts as well. Then dust thymol iodide with powder blower over gland and throw it into diseased lacunæ. Where

tonsils seat of recurring inflammation, but patient objects to removal, use electric cautery. Selecting 3 or 4 crypts at a time, apply 10 per cent. cocaine solution to interior of each with fine-pointed cotton applicator. When anesthesia sufficient, introduce curved electrode into each crypt and turn on sufficient current to produce a white heat before electrode removed. Patients thus treated are freed from further attacks. *Bishop.* Page 241

Tracheobronchial Glandular Enlargement. DIAGNOSIS. Percussion of thoracic vertebræ, especially those above level of inferior scapular angles, affords tonal changes of clinical value in this condition; these must always be correlated, however, with mural signs in the individual case. In comparison with other (neoplastic) mediastinal masses, tracheobronchial tumors affect vertebral percussion sound less, and oftener produce dullness than hyperresonance. *Da Costa, Jr.* 180

Tuberculosis, Articular. TREATMENT. X-rays found useful in bone and joint tuberculosis. Aluminum or thick leather shield to be used. Treatment not to be employed in children less than 5 years old, and in older children epiphyses should preferably be avoided. Best effects noted in cases with sinuses and secondary infection. Part exposed from all sides to an erythema-producing dose; three weeks then allowed to elapse before repetition. Joints healing under the rays show but little limitation of motion. Abscesses with skin about to yield should not be rayed, owing to danger of necrosis. *V. Schede.* 165

Tuberculosis, Laryngeal. TREATMENT. Scarlet red, 10 per cent. in a mixture of equal parts of sesame oil and petrolatum, applied twice daily in cases with laryngeal lesions, whether ulcerative or not. No unpleasant results. Prompt relief of pain in every case, tendency of ulcerations to heal, hoarseness improved, and, where only infiltrations and edema, swelling markedly less after a few weeks. *Hinman.* 306

Tuberculosis, Pulmonary. DIAGNOSIS. Contrast between resonance of air-containing tissue and deadness of the airless spot is striking when light percussion practised. If on increasing force of stroke dullness remains, one may conclude that there is an extensive area of airless tissue. A shorter apex on one side is of immense significance. In infiltrated apex a long, held inspiration gives a duller note on percussion than is found over healthy side; this is often of value in doubtful cases. Where history, symptomatology, and course of disease point to tuberculous infection, one may safely diagnosticate tuberculosis without any definite auscultatory signs. *Fishberg.* 54

The X-rays will demonstrate much more accurately the extent of involvement than any other diagnostic agent. In determining the operability of a surgical condition in a patient suffering also with pulmonary tuberculosis, or in giving a prognosis in a known case of pulmonary tuberculosis, radiographic examination is essential. *Moore.* 367

TREATMENT. Frequency of gastric atony and dilatation, with resulting digestive symptoms and secondary toxic manifestations (aches and pains in chest and right hypochondrium, morning depression, insomnia, hepatic weight, vertigo, chilliness an hour after meals, fleeting edema, etc.), in pulmonary tuberculosis pointed out. Treatment: (1) Support to stomach and abdomen by Rose belt of plaster or moleskin, followed, upon improvement, by supporting belt to be worn continuously and later in daytime only. (2) No liquids with meals or for two to two and one-half hours after. (3) Lunch to be light. (4) Recumbency, with attempt to sleep for one-half to one hour after each meal. (5) No alcohol or fresh bread. (6) Medicinal treatment: Tr. nucis vomicæ, acidi hydrochlorici dil., āā f℥ss (15 c.c.); glyceriti pepsini, f℥iss (45 c.c.); aq. menthæ pip., q. s. ad f℥iij (90 c.c.). Teaspoonful in ½ glassful of water after meals. If much flatulence, add chloroform water, 2 or 3 minims (0.13 or 0.2 c.c.) to the dose, until relieved. (7) Cold shower or sponge baths, with needle bath to abdomen, followed by brisk rub, each morning. (8) Where mucous passages and flatus: Turkish towels, wrung out in hot water, to be applied to abdomen for one-half hour after meals. (9) Thorough mastication of food and abstention from worrying at meals. (10) Fats to be avoided at first. *F. N. Robinson.* 95

Measures to overcome fever described: (1) Where prolonged fever drains on patient's strength, pyramidon is drug to be preferred—5 grains (0.3 Gm.) in cachet at night, or, if necessary, three times a day. In neurotics bromides sometimes efficacious. (2) Rest in recumbency to be insisted on until temperature does not rise above 99° in men or 99.2° in women, when patient may sit in chair for two hours, then recline on couch, in open air if possible. Exercise then gradually increased. (3) Where severe cough, sedative mixture tends to prevent fever from the exertion and autoinoculation. (4) Where rest and drugs fail, cautious use of tuberculin (T. R. or B. E.), beginning with only $\frac{1}{100000}$ mg., exerts antipyretic action, though often only for short periods. Tuberculin acts best in cases free from fever while at rest, but febrile when exercise taken. *Wethered.* 120

Value of auscultation at acromion process in apical tuberculosis emphasized; it amplifies all auscultatory signs over apices. Of 28 cases in first stage, all showed acromial breathing. *Magida.* 239

Guaiacol administration, beginning with 5 minims (0.3 c.c.) three times daily, increasing by 2 minims (0.12 c.c.) a week up to 12 or 15 minims (0.75 to 1 c.c.), and continuing the drug for four months or longer, yielded highly satisfactory results. The drug should

be taken immediately before food. The following formula was used: Guaiacolis, f℥j (4 c.c.); alcoholis, syrupi limonis, āā f℥j (30 c.c.); spiritus chloroformi, f℥ij (8 c.c.); aquæ, q. s. ad f℥vj (180 c.c.). One-half ounce three times daily. *Mayberry.* Page 366

Ulcer, Gastric. Diagnosis. Following combinations practically assure a diagnosis of ulcer: (1) Tender point with occult blood. (2) Hypersecretion with tender point. (3) Hypersecretion with occult blood. (4) Tender point with repeated positive thread tests. (5) Tender point with hematemesis. (6) Hematemesis with hypersecretion. (7) Hypersecretion with positive thread tests. *Verbrycke.* 114

Treatment. Cream diet used with success in 26 cases. One quart (4 glasses) a day yields 1800 calories. To this may be added 600 c.c. of milk or 6 slices of bread or 5 tablespoonfuls of oatmeal gruel or 3 eggs. Cream causes inhibition of gastric secretion. If not tolerated in full strength, it may be diluted with equal or greater amount of milk. Ice-cream a useful variant. Some marked cases progressed to good recovery in two or three months under cream diet. Method adapted for bed or ambulant treatment. Also useful as prophylactic against recurrence of ulcer. *Nichols.* 169

Ulcers. Treatment. In indolent tuberculous ulcers, 1 or 2 doses of old tuberculin usually cause complete healing in a week or two. *Whitfield.* 56

Urticaria. Treatment. Pituitary and adrenal preparations found useful. *Morris.* 11

Vaccination. Tincture of iodine, applied to the vesicle as soon as possible after the latter has formed, and repeated two or three days later, either prevents pustule formation or so limits it that the several pustules formed do not coalesce. The vesicles soon dry up and form a small scab. In not one of 116 cases so treated was there secondary infection with pus-producing bacteria, whereas in those not so treated about 30 per cent. were secondarily infected. There is no interference with the immunizing process. The scab should be kept covered with sterile gauze for several weeks. In cases of secondary infection with pus formation best results are obtained by removing the scab and pus, painting the base with tincture of iodine, and, when dry, covering with bismuth subiodide powder. Superfluous granulation tissue should be treated with a stick of silver nitrate. *Albert and Alden.* 369

Vomiting. Treatment. In paroxysmal vomiting of chronic, recurrent character, where no organic disease of stomach is discoverable, adrenal gland treatment is frequently of value. *Berkeley.* 20

Vomiting of Pregnancy. Treatment. Apomorphine, 1/36 grain (0.0018 Gm.) in a teaspoonful of water, found effectual in a severe case; likewise in other cases of vomiting or nausea. *Field.* 182.

Thyroidin in 1½-grain (0.1 Gm.) tabloids given in several cases, with complete curative effect. *Koreck.* 284

Vomiting, Postanesthetic. Treatment. When vomitus of hemorrhagic type, give 5 to 10 minims (0.3 to 0.6 c.c.) of 1:1000 epinephrin hydrochloride in a teaspoonful of water. Cessation of vomiting follows. *Keay.* 93

Whooping-cough. Treatment. Vaccine containing 20,000,000 dead *B. pertussis* per c.c. used in about 70 cases. Infants received 1/3 c.c. as initial dose and 2/3 c.c. four days later; others, ½ c.c. and 1 c.c. Prompt, uniformly good and often striking results obtained. In cases already having a bronchopneumonia as complication, a mixed vaccine should be used. *Davidson.* 118

Silver nitrate in 2 per cent. solution applied to throat in 95 early cases to prevent spread of infection downward from pharynx. Useful results in 84 instances. Mucus secretion prevented and coughing spells due to irritation by secretion minimized. Silver solution applied every day at first; later, and in older children throughout, on alternate days. *Ochsenius.* 182

Epinephrin, 3 minims (0.2 c.c.) of 1:1000 solution, given every four hours in case in a child 7 years old, ill six weeks. Paroxysms markedly reduced almost at once. Drug then continued 3 times a day for three weeks more. *Lord.* 280

Wounds. Treatment. Stream of air from ordinary electric fan or register found useful in drying and promoting healing in large wounds, obstinate leg ulcers, and discharging eczema. *Heisler.* 182

Mixture of saturated magnesium sulphate solution and glycerin in equal parts recommended for dressing infected wounds. *Freese.* 304

Following summary presented: *A. Incised wounds:* 1. Paint with iodine. 2. Shave dry. 3. Tie all bleeding points. 4. Remove foreign substances. 5. Suture all tendons and nerves. 6. Again apply iodine in and around wound. 7. Suture wound. 8. Apply dry sterile dressing.—*B. Lacerated wounds:* 1, 2, 3, 4, 5, same as in *A.* 6. Cut away all damaged tissue. 7. Again apply iodine. 8. Suture wound.—*C. Punctured wounds:* 1, 2, same as in *A.* 3. Enlarge opening for drainage. 4. Insert rubber drain. 5. Alcohol dressing. 6. Tetanus antitoxin.—*D. Gunshot or bullet wounds:* 1, 2, same as in *A.* 3. If much bleeding, enlarge opening and tie vessels. 4. If nerve injured, suture nerve. 5. Close wound. 6. Alcohol dressing. 7. Tetanus antitoxin. *Hoag.* 307

Book Reviews

Biochemic Drug Assay Methods. By Paul S. Pittenger, Ph.G., Ph.C., Phar.D., Instructor in Pharmacodynamics, Departments of Pharmacy and Chemistry, Medico-Chirurgical College, Philadelphia; Member of the "Committee on Physiologic Testing" of the American Pharmaceutical Association, etc. Edited by F. E. Stewart, M.D., Ph.G., Professor of Materia Medica and Botany, Departments of Pharmacy and Chemistry, Medico-Chirurgical College of Philadelphia; Chairman of the Section on Materia Medica and Pharmacy of the American Medical Association, etc. Pp. 158, with 89 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1914. Cloth, $1.50.

The physiologic standardization of drugs, such as digitalis, ergot, pituitary preparations, epinephrin, and aconite, is a matter of great significance to the practitioner, for chemical assaying is not practicable with these drugs, and these are precisely the agents in his drug armamentarium that are most likely to deteriorate. As drug therapy, because of advances in clinical methods for exploration of the various functions of the human body, becomes more and more precise, there is increasing need that the physician shall have at his disposal drugs the dosage of which he can effectually and confidently regulate. Dr. Pittenger is well fitted by extensive laboratory experience for writing such a work as this. In it will be found lucidly described the various methods now recommended for the standardization of the drugs already mentioned. All details are given, and the pieces of apparatus used are illustrated, so that the book will be suited not only for those continuously engaged in drug standardization, but for perusal by students of pharmacy and medicine, who should clearly understand the aims and procedures of the standardization of these important drugs. Dr. Pittenger has had the merit to introduce the method of putting up ergot preparations in small sealed glass containers from which the air has been exhausted before closure. From the practical standpoint this is a landmark in the history of ergot little short in importance to the discovery of its active principles a few years ago by Dale and Barger, for the vacuum permits of keeping ergot with undiminished strength for a prolonged period, thus supplying the practitioner always with a drug of definite therapeutic power, where formerly often a deteriorated sample would alone have been at hand. The blood-pressure and uterine methods of standardizing ergot, as carried out by the author, as well as the cock's-comb method still used by some, are among the procedures described in the convenient little volume under review. Various tracings illustrating results actually obtained in standardizations are included.

A Manual of Infantile Paralysis, with Modern Methods of Treatment. By Henry W. Frauenthal, A.C., M.D., Surgeon and Physician-in-chief, New York Hospital for Deformities and Joint Diseases, and Jacolyn Van Vliet Manning, M.D., Epidemiologist, Wisconsin, 1908. Octavo of 374 Pages, with 128 Illustrations, Nearly All Original. Philadelphia: F. A. Davis Company, 1914.

In this volume the authors record their personal experience with acute poliomyelitis, its epidemic appearance, its symptomatology, its diagnosis, and the methods of treatment. The daily attendance of not less than 100 to 150 children at the Hospital for Deformities and Joint Diseases in New York certainly lends weight to the authors' statements and renders the book one of peculiar value. The epidemiology of the disease is first discussed, next the exciting cause (including experimental work), the predisposing causes, the pathology, the general symptomatology, that of special types of the disease, the diagnosis in the preparalytic stage, the differential diagnosis, the prognosis as to life and disability, the prophylaxis of and immunity from the disease, the treatment of the preparalytic stage and of progressive ascending or descending paralysis, hydrotherapy, electrotherapy, physical therapy, massage and passive motion, therapeutic exercises performed before a mirror, mechanotherapy, and, finally, the surgical treatment. The illustrations bear both on the distribution of the disease, experimental work in monkeys, the minute pathology, the symptomatology (including special types), the ultimate disabilities, and the technique and results of treatment. The excellent effects of treatment secured by the authors in many members of their long series of cases, the simplicity of the text, the numerous photographs, and the firm clinical basis for the statements made render this book absolutely indispensable to all those under whose care one or more cases of acute poliomyelitis may fall.

Treatment of Sexual Impotence and Other Sexual Disorders in Men and Women. By William J. Robinson, M.D. Duodecimo of 422 Pages. New York: Critic and Guide Company, 1913. Cloth, $3.00.

In this book the author deals in his customary concise and incisive style with such matters as pollutions, spermatorrhea, masturbation, and impotence. Much valuable infor-

mation, both diagnostic and therapeutic, is afforded the reader. The author's experience in this class of cases has led him to outline definite schemes of treatment and form definite opinions as to what measures, if any, are indicated under various definite circumstances. The book contains numerous illustrative case histories, with an account of the results obtained from treatment applied in each. It cannot fail to prove useful to its readers in the management of these ofttimes difficult cases.

Spätpsychosen katatoner Art. Eine klinische Studie, von Dr. med. Maurycy Urstein, Warschau. Octavo of 440 Pages. Berlin und Wien: Urban & Schwarzenberg. New York: Rebman Company, 1913. Paper-bound, 18 marks ($4.50).

As late psychoses, the author designates mental disturbances appearing after the age of 40. The present work consists of a very extensive and detailed report of 40 cases belonging to this category, together with preliminary and concluding short sections of critical text. The author has observed that patients in the period of life referred to often present certain similar clinical features, even though the disease processes themselves be essentially different. Organic cases such as those of arteriosclerotic (senile) psychosis are excluded from consideration; hysteric cases are but slightly dealt with, and among the cases of manic-depressive insanity encountered by the author only those are taken up which presented catatonic phenomena. The author divides late catatonia into two forms, the presenile and the hypochondriac-nihilistic. The book includes a critical discussion of the mental peculiarities of the menopause, the distinction between arteriosclerotic and senile dementia and between the catatonias of puberty and of late adult life, etc.

Medical Gynecology. By S. Wyllis Bandler, M.D., Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Third Thoroughly Revised Edition. Octavo of 790 Pages, with 150 Original Illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $5.00, net; Half-morocco, $6.50, net.

The new edition of this useful and popular work shows a considerable increase in bulk over the original issue, and a part of this increase in the present volume is due to the addition of material on the internal secretions, the rôle of which in gynecology the author recognizes to be an important one. As he rightly states, a work on medical gynecology is an eminently suitable place for the discussion of this subject, and we accordingly find a chapter of not less than 55 pages devoted to it. The writings of Kermauner, J. Novak, Cushing, Biedl, and others have been drawn upon in bringing this material thoroughly up to date. The pineal, thymus, parathyroids, thyroid, hypophysis, and ovaries (in their internal secretory function) are all taken up in their relationship to gynecologic affections, and there are additional sections on what the author terms "hypergenitalism" (pubertas præcox) and "hypogenitalism" (sexual infantilism). In cases in which there is excessive thyroid activity the author recommends a combination of quinine hydrobromide, 5 grains, with dried adrenal gland, 2 grains, three times a day. The work includes a valuable section on "Associated Nervous Conditions in Gynecology." The systematic consideration of the various gynecologic affections—from the medical standpoint in particular—is, as it was in the previous editions, admirably done, and the book, in its present form, is calculated at least to maintain, if not to augment, the already notable degree of interest it has awakened in the profession.

Diagnosis in the Office and at the Bedside. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital, etc. Seventh Edition, Thoroughly Revised. Octavo of 547 Pages, with 164 Engravings and 10 Plates. Philadelphia and New York: Lea & Febiger, 1914.

The author's avowed intention in this and the preceding editions of the work has been to consider in as practical a manner as possible the symptoms of disease as they appear in the office and at the bedside. The symptoms recognition of which leads to a diagnosis are accordingly first taken up, and their significance in pointing to definite abnormal conditions then emphasized. The successive chapters of the book are devoted, respectively, to the face and head; the hands and arms; the feet and legs; hemiplegia; speech; the skin; the tongue, mouth, pharynx, and esophagus; the thorax and its viscera; the pulse, blood-vessels, and blood-pressure; the abdomen and abdominal viscera; the bowels and feces; the urinary bladder and the urine; the eye, chills, fever, and subnormal temperatures; headache and vertigo; coma or unconsciousness; convulsions or general spasms; hiccough, vomiting, regurgitation, and the character of the vomit; cough and expectoration; pain; tendon reflexes and muscle tone. The reader is enabled, through this arrangement, rapidly to ascertain the clinical meaning of each symptom observed in a given case, and by combination of the various indications thus derived reach the diagnosis in the most direct possible manner. This work, though not containing information on laboratory diagnostic methods, undoubtedly serves well the purpose for which it is intended. The illustrations are sufficiently numerous and each plainly tells its story. The index covers the text thoroughly.

The General Field

Conducted by A. G. CRANDALL

A Perennial Pest

The process of enlightening the lay public on even the most elementary principles of hygiene is a slow and difficult one, and even the most ordinary and self-evident facts are hardly allowed to germinate in the lay mind before some effort is made to uproot them.

Recently a great deal of attention has been devoted to the exploitation of health theories by publishers of lay periodicals, and, of course, the first consideration is to provide "copy" that will attract attention and catch the eye and fancy of the reader.

For this and other reasons it has been the custom of late for notoriety seekers, in the profession and out, to publish articles designed through sensational and bizarre statements to amuse the reader, irrespective of scientific accuracy.

Where earnest and painstaking writers have endeavored to make clear to the lay public the value of a properly selected dietary, an opening is afforded for the sensationalist to come forward with a series of iconoclastic statements intended to ridicule the well-meant attempts of the great body of the medical profession.

Most of these picturesque and readable, but wholly inaccurate, contributions are estimated at about their real value by the intelligent reader, but occasionally, where the contributor is a physician, he does succeed in confusing the popular mind.

The Prize Prevaricator

It is often said that no phase of human nature will ever surprise the experienced physician, but it is probable that the judge of the divorce court is, if possible, more immune against shock.

More ingenuity seems to enter into the testimony in the divorce trial than was ever exercised by Baron Munchausen or any other writer of fiction.

It is the pleasant duty of the divorce court to sift out the few grains of real fact from the mass of conflicting testimony and exercise judgment surpassing that of Solomon in making a decision.

It is quite likely that the elaboration which is shown in framing up plausible court testimony is responsible for many a miscarriage of justice where the real, uncolored facts are disclosed. The habit of discount becomes so fixed that the truth is not recognized by the Court and the honest client suffers for the sins of others.

* * *

The World Owes Them a Living

About the time the American hobo first became generally known to literature, his creed was also explained, viz., the world owes me a living. Had any one been told that in a short cycle of years this slogan of the hobo was to be adopted by the British nation, it would have been regarded as a dream.

The dream has come true and it

promises to be a very bad dream indeed. Why should a large number of people who have a chronic disinclination for labor ever worry about the future if their future is provided for by the government?

Nearly everybody has to work about all his time in order to get a living. He has to work pretty industriously too, and if society is to burden itself with the responsibility of taking away all anxiety from the ne'er do wells it will prove a heavy load.

The diplomacy of England may have won a victory in the Panama tolls dispute. This country can well afford to take an optimistic view of such matters, however, in view of the object lesson likely to be acquired from the socialistic experiment now being tried out by Lloyd-George. The whole world is likely to profit by this venture.

* * *

The Sea Serpent

Marvelous tales have been related of the sea serpent. One of his favorite tricks is to bite off the cork leg of some sailor returning from shore leave heavily freighted with samples taken from bottles bearing various labels.

Occasionally fishermen off the Jersey Coast who have prepared themselves with applejack to endure the strenuous labors of their calling have seen the sea serpent at a distance, but no serious accident has occurred in recent years.

It might be easily conjectured that physicians in attendance at the American Medical Association Meeting at Atlantic City, and sojourning at that attractive resort for some days, as they often do, might themselves get a glimpse of the sea serpent. But although the 1914 meeting was held under climatic conditions which are said greatly to favor the activities of the sea serpent, no instance of his appearance in the "offing" has come to hand.

* * *

Where the Doctor Needs Good Judgment

There are numerous occasions in modern finance where reluctant witnesses seek to evade the giving of testimony on the plea of illness. Under such circumstances the doctor usually casts the deciding vote as to whether or not the witness shall appear in court.

It is quite likely that in almost any such instance the statement by the family physician that in his judgment the reluctant patient could safely give testimony would be equivalent to a change of physicians in that family in the near future. Nevertheless, the physician should avoid any appearance of connivance with the patient under such circumstances.

The willingness of medical experts to take sides in court cases has already reached the proportions of reflection upon the integrity of the so-called specialist, and the reputation of the profession in general should not be made to suffer in public esteem through complacency on the part of the medical adviser of some financial magnate who fears, for abundant reason, to make explanation in court.

* * *

Unappreciated Philanthropy

The Erie Railroad has been ordered by the Public Service Commission of New Jersey to wash their car windows. They had refused to do it.

Through an evident misunderstanding of their motive, this unwillingness was construed as an exaggerated form of economy.

It has been stated by good medical authorities that the tropical glare of sunlight is productive of neurasthenia. The New York commuters, owing to the strenuous life they lead, are peculiarly susceptible to this form of ailment. When a philanthropic railroad wished to save them from the glare of light incident to early summer they did not appreciate it.

Hardly anybody appreciates the railroads these days and the railroads feel deeply about it. An ungrateful public will not buy railroad stocks at anywhere near the price they were formerly sold for, and in many instances are even reluctant to load up with their bonds.

* * *

More Feminism

Affairs are in a fearful state in New York City. As is well known to outsiders who occasionally travel by New York street cars, a large proportion of the inhabitants of that city, through natural reluctance to stay in their homes, spend a good deal of their time traveling to and fro by subway, elevated, and surface cars.

Occasionally some elderly male citizen absent-mindedly arises and gives his seat to a woman, whereupon he is sure to be deeply grieved at the lack of appreciation manifested by the recipient of the favor. If the gentleman of the old school is of literary turn, he writes to a daily newspaper and complains of this ingratitude.

A New Yorker who has given deep thought to the subject has concluded that this lack of politeness of New York's feminine population is merely a manifestation of the feminist spirit. Why should any one express appreciation when they receive what belongs to them in the first place? Of course, such instances of unappreciated politeness like the foregoing are not very numerous, as a few experimental trips on the New York street cars will prove conclusively.

* * *

A Rude Shock

An enterprising young Englishman coming to this country as manager in a highly specialized line of business made the acquaintance of a maiden some ten years his senior and indulgently allowed her to issue formal notices of an engagement. And now, having changed his mind, this genial gentleman has been haled into court and made to give bond for his appearance in a breach of promise suit. He says it is a pretty kind of country where a man can't change his mind about marrying some woman without having the law get after him.

No doubt, it must have been quite annoying to come in such rude contact with the customs of another country, but the victim of so strange a custom is probably safer with the fair sex of the United States than he would be with a considerable portion of the feminine population of his native country.

It is time that mere man began to realize that those of the feminine persuasion are not to be trifled with.

* * *

Spanking

A certain mother's club in Pennsylvania recently held a symposium on proper methods of applying that correction which seems to be essential to

the proper upbringing of young America, and in the mutual confessions 33 out of 34 mothers present admitted that occasionally it became necessary to apply corporeal punishment.

This will be a shock to the feelings of a large number of unmarried theorists in the management of husbands and the upbringing of children.

The probabilities are that most of the mothers who went on record on this occasion entered upon family life with very strong prejudices as to the brutality of corporeal correction of children. Having given their theories a thorough test, they found them impractical and fell back upon the only absolutely sure method of inspiring respect.

There can be no normal physical developments among children without the right mental attitude, an attitude based upon the knowledge that wrongdoing brings its inevitable punishment. The experiences of the 33 mothers above referred to might well be published as a pamphlet for wide distribution.

* * *

The English Coal Miner

More than a million men and boys are reported by the London Lancet to be engaged in coal mining in Great Britain. As at the present time the law forbids women working underground, only about 6500 females are now employed, chiefly in preparing the various grades of coal for the market.

Although coal mining is of long standing as an industry, it remains one of the most hazardous forms of employment.

The temperature of the English mines is said to average a rise of about 1° F. to every 72 feet of depth. It is apparent that there are variations to this rule, however, as there is one mine in Lancashire which has reached a depth of nearly 4000 feet.

Accidents naturally constitute a great factor in mortality of miners, but it is gratifying to learn that such accidents have diminished 25 per cent. during the last ten years.

Employment in the mines seems to be followed by a large train of nervous disorders which are generally regarded to have been superinduced by trauma. While coal miners are said to suffer to a large extent from diseases of the lungs, it seems that the death rate from pulmonary tuberculosis is abnormally low. One phase of this report which cannot fail to make its appeal to those humanely disposed is that, by comparison with those engaged in other occupations, the miner is characteristically serious and his "facial expression indicates mental sadness." Thus does the undemonstrative English investigator characterize it.

The miner has never been overpaid. Unfortunately he has often alienated from himself well-deserved sympathy by his failure in a crisis to refrain from violence and disorder, a method which has seldom proved effective in establishing needed reforms.

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THE NEURASTHENIC INVALID.

Like the poor, the neurasthenic is "always with us," and while the stress and strain of modern life and living continue, the physician will be called upon to treat the more or less chronic invalid who exhibits all sorts of bizarre symptoms, in endless and kaleidoscopic variety. It is, of course, an easy matter to advise the physician to search out and remedy the operative cause of the disorder, but it is not always as easy to do this, especially when no organic changes are discoverable. While purely symptomatic treatment may be unscientific, it is usually essential, in order to gain and retain the confidence of the patient. There is, however, one pathologic finding in a large majority of cases, and that is anemia of greater or lesser degree. In some instances this may be found to be the essential cause of the neurotic symptoms. In any event, this condition should be corrected, and for such purpose there is no better remedy than Pepto-Mangan (Gude). When a hematinic is indicated for a nervous, cranky man, or a finicky, more or less hysterical woman, Pepto-Mangan is peculiarly serviceable, as the patient cannot consistently object to the taste, which is agreeable to everyone. The digestion is not interfered with in the least, constipation is not induced, and the blood-constructing effect of the remedy is prompt and certain. It is always worthy of trial not only in the anemia of the neurasthenic invalid, but also in all conditions of blood and tissue devitalization.

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(CONTINUED ON ADVERTISING PAGE 33.)

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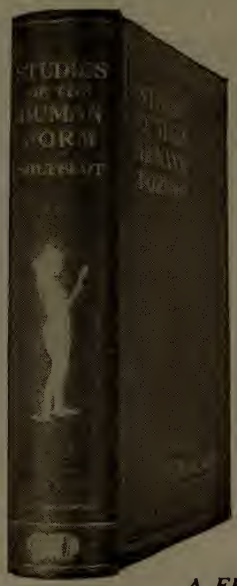

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